M. P. GANDHI

THE SUGAR INDUSTRY

WEEDED OUT

(1950 ANNUAL)

255

Editor : **M. P. GANDHI,** M.A., F.R.E.S., F.S.S., J.P.

Member, Co-ordinating Committee, All-India Council of Technical Education ; Member, Standing Finance Committee, Indian Council of Agricultural Research ; Member, All-India Cottage Industries Board ; Member, Bombay State Handloom Board ; Chairman, Bombay State Minimum Wages Committee (Public Motor Transport) ; Member, B.B. & C.I. Rly. Advisory Committee, etc. [Formerly, Hon. Professor, Sydenham College of Commerce ; Technical Adviser, Indian Tariff Board ; Secretary, Federation of Indian Chambers of Commerce and Industry.]

Vol. 15 JUNE 1951. Rs. 6/- ; By V.P.P. Rs. 6/12

To be had of : **GANDHI & CO.** (Publishers),

Jan Mansion, Sir Pherozshah Mehta Road, Fort, Bombay.

Telegrams : "KEEN", BOMBAY.

Telephones : Office : 24047. Res : 43926.

No. 10627 Date 20.10.70

REVOLUTION IN CANE CULTIVATION

... the world where better cane is grown, large Allis-... crawler and small wheel type tractors, assisted by ...ed deep tillage tools and equipment have been revolu-... cultivation methods. In India too, they have already ...e acclaim of intelligent cane cultivators everywhere.

PASHABHAI PATEL & CO. LIMITED

BOMBAY

338.1736

In 2 I Gb-2.

The most Indispensable & Authoritative Annual Reference Book for the Indian Sugar Industry

THE SUGAR INDUSTRY

(1950 ANNUAL)

Vol. 15.

Editor: M. P. GANDHI, M.A., F.R.E.S., F.S.S., J.P.

Member, Co-ordinating Committee, All-India Council of Technical Education; Member, Standing Finance Committee, Indian Council of Agricultural Research; Member, All-India Cottage Industries Board; Member, Bombay State Handloom Board; Chairman, Bombay State Minimum Wages Committee (Public Motor Transport); Member, B.B. & C.I. Railway Advisory Committee, etc.

350 pages: June 1951. Price: Rs. 6: V.P.P. Rs. 6/12. Sh. 12.

PRINCIPAL FEATURES:

- Retrospects and Prospects of the Sugar Industry in India in 1949-50 and 1950-51, and position in world economy.
- "The Sugar Industry at a Glance", containing 41 Statistical Tables re: production and consumption of Sugar, imports & exports, Production of Gur, Cane crop, Index Numbers, etc.
- *Personnel* of U.P. and Bihar Sugar Control Board, 1950-51.
- *Personnel* and functions of Central Sugarcane Committee, 1950-51.
- Necessity of Regulation of Industry on an all-India basis.
- Discussion on Import and Export Prospects, Sugar Control Policy, and Statutory Rationing.
- Capital and Dividend Statement of Sugar Mills. (Latest.)
- Comments on New Sugar Policy, 1950-51.

APPENDIX

- *Complete and up-to-date list of Sugar Mills, working and projected, with addresses of Managing Agents, information regarding crushing capacity, etc. in INDIA, and in PAKISTAN.*

Extract from Reviews of 1949 Annual (Vol. 14)

"International Sugar Journal", London, June 1950.

"The new issue of this well-known reference book once again discusses in detail the year's progress of the sugar industry both in India and in the world in general".

To be had of:

Messrs. GANDHI & CO. (*Publishers*), Jan Mansion, Sir P. M. Road, Bombay 1.
Telephones: Office: 24047. Res.: 43926 Telegrams: "KEEN" Bombay.

BOOK YOUR ADVERTISEMENTS EARLY FOR 1951 ANNUAL

WEEDED
Date........

Vol. III. JULY 1951 Re. 1-8-0.
Pages 80. By V.P.P. Re. 1-12-0.

The Handloom Weaving Industry

(1950 ANNUAL)

(With a Foreword by H.E. Maharaja of Bhavnagar, Governor of Madras)

Editor: **M. P. GANDHI, M.A., F.R.E.S., F.S.S., J.P.**

Editor, Indian Cotton Textile Industry Annual, and Indian Sugar Industry Annual; Member, Co-ordinating Committee, All-India Council of Technical Education; Member, Standing Finance Committee, Indian Council of Agricultural Research; Member, All-India Cottage Industries Board; Member, Bombay State Handloom Board; Member, B.B. & C.I. Rly. Local Advisory Committee; Chairman, Bombay State Minimum Wages Committee (Public Motor Transport), etc.

[Formerly, Part-time Honorary Professor in Cotton Economics, Sydenham College of Commerce & Economics, Government of Bombay (1943-49); Technical Adviser, Indian Tariff Board (1947); Controller of Supplies, Bengal Circle, Supply Department, Government of India; Secretary, Indian Chamber of Commerce, Calcutta; Secretary, Indian Colliery Owners' Association; Secretary, Indian Sugar Mills Association; Secretary, Federation of Indian Chambers of Commerce & Industry; Secretary, Indian National Committee, International Chamber of Commerce; Chief Commercial Manager, Dalmia Cement Ltd. & Rohtas Industries Ltd.; Officer, Credit Department, National City Bank of New York, Calcutta; Director, Indian Sugar Syndicate Ltd.; Member, Bihar Government Labour Enquiry Committee; Member, U.P. & Bihar Joint Power Alcohol Committee; Member, U.P. & Bihar Sugar Control Board; Member, Cottage & Rural Industries Sub-Committee of the National Planning Committee; Member, Advisory Committee, East Indian Railway; Member, Executive Committee, Bengal Textile Institute; Ashburner Prizeman, Bombay University; Member, Bombay Traffic Advisory Committee (1947-49); Examiner in B.Com. and M.Com. Examinations of the Universities of Lucknow and Bombay; etc.]

Our forthcoming Special Publication :

"Major Industries in the Republic of India—1951"

With a Foreword by Sir M. VISVESVARAYA, K.C.I.E., LL.D.,

President, The All-India Manufacturers' Organization, Bombay.

Editor: **M. P. GANDHI**

Size 10" × 13"

Date of Publication: SEPTEMBER 1951.

Printed on Superfine Art paper.

Contributions from Distinguished Writers.

Book your Advertisements at an early date.

Rs. 7/8

You are requested to book your copy early.

The only Authoritative & Indispensable Annual Reference Book for the Indian Cotton Textile Industry

The Cotton Textile Industry

(1950 ANNUAL)

Vol. XIII.

Editor : **M. P. GANDHI,** M.A., F.R.E.S., F.S.S., J.P.

Member, Co-ordinating Committee, All-India Council of Technical Education; Member Standing Finance Committee, Indian Council of Agricultural Research; Member, All-India Cottage Industries Board; Member, Bombay State Handloom Board; Member, B.B. & C.I. Rly. Advisory Committee; Chairman, Bombay State Minimum Wages Committee (Public Motor Transport), etc.

"In order to know anything authoritatively about the Cotton Textile Industry, usually I refer to Mr. M. P. Gandhi's publications".

— The Hon. Shri H. K. Mahatab,
Minister for Industry & Commerce.

300 pages: April 1951. Price: Rs. 6: V.P.P. Rs. 6/12. Sh. 12.

CHIEF FEATURES:

- Retrospects and Prospects of the Indian Cotton Textile Industry, during the war period and in the near future.
- *Personnel* of the Cotton Textile Advisory Committees, and the Standing Handloom Committee (1950-51).
- "The Cotton Industry at a Glance" giving 18 authoritative and up-to-date Statistical Tables relating to the Industry.
- Latest Tariff on Piecegoods and Yarn, and Text of Cotton Textiles (Control) Order, 1948 with latest amendments thereto, and Cotton Control Order, 1950, and references to other allied Control Orders.
- Export Policy re: Cloth, Yarn, and Raw Cotton.
- Profits of Cotton Mills in 1949.
- Discussion on latest Labour Legislation.
- Position of Raw Cotton *vis-a-vis* Pakistan & other countries.
- Textile Industry abroad.

THREE APPENDICES:

- A detailed and up-to-date Appendix regarding cultivation of Cotton, Exports of Cotton, Imports of Cotton, Prices of Cotton, Consumption of Cotton in Indian Mills, etc.
- A survey of the industry's post-war plan for expansion.
- *Complete* and *up-to-date* list of Cotton Mills in India, with names and addresses of Managing Agents, number of Spindles and Looms.

Mills in Pakistan, and mills under erection shown separately.

Extract from Reviews of 1949 Annual (Vol. XII):

"The Economic Journal", London, July 1950: This provides one of the best annual reviews of the Indian Cotton Industry.

To be had of:

Messrs. GANDHI & CO. (*Publishers*), Jan Mansion, Sir P. M. Road, Bombay 1.
Telephones: Office: 24047. Res.: 43926   Telegrams: "KEEN", Bombay.

BOOK YOUR ADVERTISEMENTS EARLY FOR 1951 *ANNUAL*

HAVE YOU SEEN OUR

The Indian Cotton Textile Industry Centenary Volume (1851-1950)

Editor: **M. P. GANDHI**

350 pages
Size
10″ × 13″

Contributions from Distinguished Writers.

Date of Publication:
DECEMBER 1950

Rs. 15 (Postage & Packing Rs. 2 extra)

De-Luxe edition Printed on Superfine Art paper.

OUR FORTHCOMING PUBLICATION:

"Major Industries in the Republic of India — 1951"

Editor: **M. P. GANDHI,** M.A., F.R.E.S., F.S.S., J.P.

Editor, Indian Cotton Textile Industry Annual, and Indian Sugar Industry Annual; Editor, Indian Cotton Textile Industry—Centenary Volume (1950); Member, Co-ordinating Committee, All-India Council of Technical Education; Member, Standing Finance Committee, Indian Council of Agricultural Research; Member, Executive Committee, Cottage Industries Board; Member, B.B. & C.I. Railway Advisory Committee, Bombay; Member, Bombay State Handloom Board; Chairman, Minimum Wages Committee (Public Motor Transport), Bombay State.

With a Foreword by Sir M. VISVESVARAYA, K.C.I.E., LL.D.,
President, The All-India Manufacturers' Organization, Bombay.

Extract from Foreword:

"Those who are acquainted with Mr. M. P. Gandhi's past work on Sugar Industry and Cotton Textile Industry will welcome the extension of his interest to the Major Industries".

Extract from message of Hon'ble Shri H. K. Mahatab, Minister, Commerce & Industry:

"Shri M. P. Gandhi whose Indian Cotton Textile Industry Volume has already earned him a name, is now engaged in bringing out a special publication on Major Industries in the Republic of India, 1951. . . . Knowing Shri Gandhi as I do, I am quite sure he will place all the facts relating to the Major Industries in India before the public. . . . I sincerely congratulate Mr. Gandhi on the part he is playing to stimulate the activity which is most needed in the country".

Price: Rs. 7-8-0. **Date of Publication: September 1951.**

Messrs. GANDHI & CO. (*Publishers*),
Jan Mansion, Sir Pherozshah Mehta Road, Fort,
BOMBAY 1 (India)

Telegrams: "KEEN" Telephones: { Office: 24047. Residence: 43926.

Please book your advertisements early in this *De Luxe* Volume which is being printed on Superfine Art Paper. Size: 10″ × 13″

To be had of:

Messrs. GANDHI & CO. (*Publishers*), Jan Mansion, Sir P. M. Road, Bombay 1.

THE SUGAR INDUSTRY — 1950 ANNUAL

Editor: **M. P. GANDHI**

DETAILED CONTENTS

PART I

	PAGE
PREFACE	i–iv
New Sugar Policy for 1950–51	i–iii
Special Features of 1950 Annual	iii–iv
SUGAR INDUSTRY AT A GLANCE	i–lxxx
(A) FORTY-THREE STATISTICAL TABLES, ETC.... ...	i–xlii
(B) EVOLUTION OF A NEW SUGAR POLICY:	xliii–lviii
A Brief Chronology of Sugarcane, Sugar and Gur Prices	xliii
Price Position in Pre-Gur Control and Gur Control Periods and changes contemplated by the new sugar policy	xliv
The Sugar and Gur Control Order, 1950	xlv
Fall in Gur and Khandsari Prices—Result of Gur control	xlvi
Government measures to control Prices and Manufacture of sugar	xlvii
Palm Jaggery exempted from purview of Sugar and Gur Control Order, 1950	xlviii
Concessions to produce 1 lakh tons Additional Sugar in 1950	xlviii
Additional Sugar Price Concession extended ...	xlviii
Sugarcane Price fixed for Bihar	xlix
Salient Features of the New Policy for 1950–51 ...	xlix
Ex-factory Prices of Sugar for 1950–51 season (Rs. 29–12–0 per maund for E27 quality) with four Schedules ...	l
New Prices for 1950–51 Season effective from 1st Nov. 1950	lii
Informal Rationing for Sugar in 1950–51	lii
Open Market in Sugar after achieving Target Production	liii
No free market sales of sugar unless Government secures 10 lakh tons for controlled distribution	liii
Government releases excess over quota for open market	liv

M. L. D. S. MADRAS. LIBRARY

	PAGE
Minimum Prices of Gur for 1950–51 season at which Gur may be sold in different States	lv
Ceiling Prices for Khandsari for 1950–51 season ...	lvi
Ban on movement of Khandsari, Bura and factory sugar from 9th February 1951	lvi
Price of Bura Sugar and Sugarcandy (1950–51) ...	lvii
No restrictions on palm gur, or palm sugar in 1950–51 ...	lvii
Retail price of Cube Sugar in 1950	lvii
Ex-factory prices for E27 sugar for 1950–51 season in Madhya Bharat	lvii
Allowances for Transport Charges of Sugar in U.P. ...	lviii
(C) LAW AND LEGISLATION (IN 1949–50 AND 1950–51) RELATING TO SUGAR INDUSTRY:	lviii–lxv
Sales Tax Continuance Order effective from April 1950 ...	lvii
Exports of Sugar exempted from Sales Tax in U.P. in 1950–51	lviii
Sales Tax in U.P. and Bihar—1949–50 and 1950–51 ...	lviii
Starting and closing of factories controlled by Govt. ...	lix
The Punjab Sugar Factories Act, 1950	lix
The Text of the Sugar and Gur Control Order, 1950 ...	lix
Revenue Concessions to increase production in 1949–50 ...	lxii
The U.P. & Bihar Sugar Commission	lxiii
The Composition of the Sugar Commission 1950–51 ...	lxiii
U.P. & Bihar Sugar Factories Control Act	lxiii
Composition of the U.P. Technical Committee ...	lxiii
Composition of the U.P. & Bihar Control Board, 1951–52	lxiv
Levy of licence fee on sugar factories by District Boards in U.P.	lxiv
Export of Molasses banned in 1949–50	lxv
Import Duty on Sugar Machinery (1949–50) ...	lxv
(D) INDIAN CENTRAL SUGARCANE COMMITTEE ...	lxv
(a) Its Formation in 1944	lxv
(b) Funds of the Committee	lxvi
(c) The 13th Meeting of the Committee	lxvii
(d) The 14th Meeting of the Indian Central Sugarcane Committee	lxviii
(e) Composition of the I.C.S. Committee, 1950–51 ...	lxxi
(E) RESOLUTIONS PASSED BY THE INDIAN SUGAR MILLS' ASSOCIATION IN 1951	lxxii
(F) FURTHER EXPANSION OF SUGAR INDUSTRY ...	lxxvi

PAGE

(G) IMPORT DUTY ON SUGAR IN 1949–50 AND 1950–51 ... lxxvii

(H) QUALITY OF SUGAR MANUFACTURED IN 1948–49 AND 1949–50 lxxviii

PART II

A REVIEW OF THE SUGAR INDUSTRY IN THE INDIAN UNION DURING 1949-50 SEASON AND COMMENTS ON THE 1950-51 SEASON

CHAPTER 1: **Introductory** **1–5**

(1) Factors which influenced the working of factories in 1949-50 season 1

(2) Their Effect on Sugar Production, Sugar Industry and Economy of the country 2

(3) Production of cane in 1949-50 & its value 5

(4) Total value of Gur and Sugar production in 1947-48 to 1949-50 5

CHAPTER 2: **Sugar, Gur and Khandsari Production in 1947-48 to 1949-50 season** **6–16**

Trends of Sugar & Gur Production in 1947-48 to 1949-50 ... 6

Sugar and Gur Production in 1947-48 to 1949-50 6

High Prices of Gur & Khandsari owing to want of Control —main cause of the fall of Sugar Production in 1949-50 ... 7

Khandsari Production up in 1949-50 8

Production of refined Sugar in India 9

Khandsari Sugar Production in factories using power ... 9

Khandsari Production liable to Excise duty 10

Excise duty collected from Khandsari 10

Gur Production in U.P. in 1949-50 11

Cane crushed in U.P. in 1949-50 11

Causes of shortage of duration in U.P.—Committee appointed by U.P. Government 12

Sugar Production in 1950–51 season 13

Sugarcane forecast for 1949–50 and 1950–51 13

Diversion of cane area to food crop 14

How Sugar Production can be increased to 12 lakh tons ... 15

Prospects of New Sugar policy 16

PAGE

CHAPTER 3: **Cane, Sugar and Gur Prices** 16–26

A Brief Survey of Cane, Sugar and Gur Prices in India ... 16

Comparative Rise in Prices of Sugar and Cane since 1942 ... 18

An Analysis of Prices of Sugar, Sugarcane and Gur during the periods of Control, De-control and Rationalised De-control from 1932 to 1950 19

Cane Price instrumental in the rise of sugar price 20

A Break-up of the Price of Sugar for 1949–50 and Estimate for 1950–51 season 20

Cane Price excessive and needs to be reduced 21

Need to implement Date-bond Variation Scheme 22

Cane Price must be in parity with Sugar price and Sugar recovery 23

Losses suffered in U.P. & Bihar owing to variations in recovery and duration of the season 26

CHAPTER 4: **Cost of Production of Sugar in India** ... 26–47

A Review of the Cost of Production of Sugar during the last 18 years 26

Cane Cost excessive and needs to be reduced 27

Sugar Price Rise not Extraordinarily High 30

Burden of State Cess on Consumers 31

Burden of Government Taxation and Cane Cost 31

Manufacturing charges not capable of much reduction ... 32

Reduction of Profit not possible 33

Increased Direct Taxation absorbs much from net profit ... 34

Reduction of Profit as a result of variations in estimate and actuals on recovery and duration 35

Profit negligible on basis of present cost of establishment and replacement, etc. 36

Sugar Industry not profiteering 36

Comparative Technical Efficiency satisfactory 38

Sugar Plants in India getting obsolete for lack of renewals ... 41

Technical difficulties of Indian Sugar Factories 41

Cane Transport Cost increasing and must be lowered ... 42

Co-operative Societies' Commission 43

Sales-Tax on Sugar in U.P. and Bihar 44

PAGE

Total Value of Shares of Government, Cultivator, and Workers in the Sugar Production in 1938–39 to 1948–49 44

Suggestions for reduction of the cost of production and price of sugar in the next 5 years to bring it to Rs. 18 or Rs. 19 per maund as recommended by the Tariff Board (1950) ... 45

Estimate of the Sugar Price details in 1955 if the above suggestions are implemented 47

CHAPTER 5: **Protection to the Indian Sugar Industry** ... **48–63**

A Brief History of Protection to the Indian Sugar Industry ... 48

Excise duty and Import duty on Sugar, sugarcandy and molasses in India from 1932 to 1951 50

Revenue duty replaces Protective duty from 1st April 1950 ... 50

U.P. & Bihar Governments withdraw Recognition to Syndicate 50

Some important conclusions and recommendations of the Tariff Board, 1950, and our brief comments thereon 51

Government withdraws Protection to the Sugar Industry from 1st April 1950 54

Government Resolution on Tariff Board's (1950) recommendations regarding: 55

1. The Indian Sugar Syndicate 56
2. Sugar Crisis in July-August 1949 56
3. Protection to Sugar Industry 57

Our Views on Withdrawal of Protection to Sugar Industry ... 58–63

(*a*) Sugar Industry fared tolerably well during the period of protection 59

(*b*) Percentage of Costs of sugar production in India in 1932–33 to 1948–49 59

(*c*) Shares of Government and Cultivators in the total value of production in 17 years of protection ... 60

(*d*) Progress of Sugar Industry in last 18 years of protection 60

(*e*) Tariff Board 1950 not justified in allocating the blame for inefficiency to industry 61

(*f*) Feeling of Security in minds of interests associated with industry shaken 61

(*g*) No cause for apprehension of large-scale imports ... 61

(*h*) Total Value of Production of Sugar and Gur in India from 1946–47 to 1949–50 and Role of Industry in Country's Economy 62

PAGE

CHAPTER 6: **Cane Cess, Funds for Research and Cane Development in India :** **63-74**

Cane Cess goes to increase Price of Sugar—if it is abolished the price of sugar can be brought down by Re. 1-14-0 per maund and if it is reduced to half the price of sugar can be brought down by Annas 15 per maund. 63

Cane Cess in U.P. & Bihar and Expenditure on Cane development since 1938-39 to 1948-49 64

Rate of cane cess in U.P. and Bihar—1938-39 to 1943-44 ... 64

Cane Cess in Bombay since 1948 64

Statement showing the rate of cess, total income from cess and expenditure on cane development and research in U.P., Bihar, Bombay, Mysore—1944-45 to 1949-50 65

State-aid to Research not adequate 66

Collections from Cess and Expenditure on Research in U.P. and Bihar in 11 years ending 1950 67

Expenditure on Research must be increased 68

Statement showing the annual expenditure of the Indian Central Sugarcane Committee from its normal funds—1944-45 to 1950. 69

Curtailment of expenditure on research, a false economy ... 70

5-year Plan to increase yield needs to be financed ... 71

Success of research should be measured in terms of increase in yield 71

Cane cess and cane prices in U.P. for 1949-50 season ... 72

Total Cane Cess in U.P. 1949-50 season 73

Expenditure on cane development in U.P. in 1949-50 season ... 74

CHAPTER 7: **Utilisation of By-Products of the Sugar Industry 74-80**

Government's interest in 1949-50 in utilization of by-products... 74

Recommendations of the Tariff Board, 1950, on the subject ... 74

New Uses of by-products of Sugar Industry

(1) Wrapping paper from bagasse 75

(2) Compost from press-mud and cane trash ... 76

(3) Molasses and its utility for power alcohol ... 77

Production of molasses and recovery per cent cane ... 78

Power Alcohol Industry in India 79

Power Alcohol Production in 1949-50 79

Target for Power Alcohol Production in 1950-55 ... 80

PAGE

CHAPTER 8: **Development of Palm Gur Industry in India** **80-86**

Need to develop palm Gur industry in India ... 80

Economics of Palm Gur manufacture 80

Government takes interest in development of palm gur industry 81

Early History and Statistics of palm gur industry ... 81

Present Position and Future Prospects 82

Neera—a new avenue of employment 84

Palm jaggery—its annual production 85

Government Concessions to Palm Gur Industry in 1950-51 ... 86

CHAPTER 9: **Imports and Exports of Sugar** ... **86-89**

Expenditure on Sugar Imports since 1914-15 ... 86

Imports of Sugar in 1949-50—total 5,550 tons only ... 86

Estimated cost of total imports of 60,050 works out to Rs. 4.3 crores 86

Imports of Sugar prove costly 87

Some Foreign Exchange could have been saved, if exports of Sugar were not permitted in 1949-50 89

Purchases of Foreign Sugar—Mr. Ganga Nath's report absolves Govt. officials of responsibility of high price 89

CHAPTER 10: **Consumption of Sugar in India** ... **90-96**

Consumption of Sugar in India on the increase 90

Sudden Increase in consumption in 1948-49 90

Tariff Board (1950) Estimate of consumption of Sugar ... 91

Consumption of Sugar in 1949-50 and Prospects for 1950-51 ... 91

Average *per capita* consumption very low in India ... 92

Consumer expenditure on Sugar from 1947-48 to 1950-51 ... 92

Per capita expenditure in different countries 93

Utilization of Sugar and Gur in India 93

Table showing utilization percentages for different items in case of Gur and Sugar 94

Confectionery requirements not met 94

Sugar requirements of confectionery industry 95

Confectionery consumption in foreign countries 95

Imports of foreign confectionery into India 95

PAGE

Value of imports of confectionery—1941-42 to 1946-47 ... 95

Total demand of the confectionery industry in India works out to 3% of total sugar production 96

CHAPTER 11: **Principal Agricultural Problems of the Indian Sugar Industry** **96-108**

Main Agricultural Problems of the Indian Sugar Industry: namely, to increase yield of cane per acre, improvement in quality of cane and reduction in the cost of cultivation 96

Dr. Burn's Target of Cane yield—55 tons per acre ... 97

Variations in prices of different qualities of cane suggested ... 97

Increase in yield of tonnage and cheapening cost by manuring, ratooning, etc. 97

Increase in cane acreage not necessary—palm gur possibilities should be explored 98

Diseases in cane and pests must be eradicated 98

Increase in cane yield per acre as a result of parasite control ... 99

Education of cultivators by demonstration of improved methods 99

Tube-well Irrigation Schemes and Centre's Subsidy Rs. 3 lakhs to U.P. for 1950-51 100

Improvement in cane crop essential 101

Valuable educational effect of cane-crop 102

Improvement of cane essential 102

Lack of nutrition to soil must be remedied 102

Clash between cane cultivator and consumers' interest ... 103

Substitute Gur for Sugar 104

No Colour Bar for Gur 104

Protection of Sugar Industry, our solemn duty 104

Integrity of Sugar Industry must be maintained unimpaired ... 105

Development must be steadily maintained 105

Sugar Industry has fully justified protection 106

Sugar Industry and its immense size 106

Increase in production and cheapening of price are urgent needs 107

Curtailment of expenditure on Research, a danger signal, and plea for revival of the grant of 4 annas per cwt. on excise duty ... 107

Area under sugarcane in India is 2 per cent of the area under food crops 107

Need for soil rejuvenation to increase yield 108

PAGE

CHAPTER 12: **Sugarcane: its Development, Marketing and Research** **109-120**

NEED FOR A TEN-YEAR PLAN FOR CANE DEVELOPMENT ... 109-113

(*a*) Average Yield of cane must be increased to lower cost of production 109
(*b*) Average yield of cane under the protection period ... 110
(*c*) Table of targets of cane yields per acre under 10-year plan 111
(*d*) Need to link sugarcane competition with costs and sucrose contents 111
(*e*) Main aim should be to reduce cost of production and improve quality 111
(*f*) Canes grown in U.P. in 1949-50 113
(*g*) Higher yield gives greater profits and lower costs ... 113

..GARCANE—ITS DEVELOPMENT IN U.P. IN 1948-49 ... 114-116

(*a*) Object of cane development 114
(*b*) Improved methods of cane cultivation 115
(*c*) Cane seed distribution and varietal replacement ... 115
(*d*) Manuring 115
(*e*) Distribution of improved implements 115
(*f*) Irrigation 116
(*g*) Cane pests and disease 116
(*h*) Publicity and propaganda 116

SUGARCANE MARKETING IN U.P. IN 1948-49 117

LATEST MEMORANDUM ON VARIETAL POSITION IN INDIA IN 1948-49 118

SUGARCANE RESEARCH IN BIHAR IN 1949-50 119

CHAPTER 13: **Cost of Cultivation of Cane** **120-125**

Need for a comprehensive enquiry into cost of cultivation ... 120
Cost of cultivation of cane in Madras—1947-48 and 1948-49 ... 121
Cost of cultivation varies from State to State 123
Smaller area can give larger quantity of cane 123
A Statement showing cost of cultivation per acre in different States in India 124

CHAPTER 14: **Sugar Industry in Various States in the Indian Union and Pakistan** **125-132**

Sugar Industry in the Bombay State 125

PAGE

Sugar Industry in Mysore State in 1947–48 to 1949–50 ... 126

Sugar Industry in Madras in 1949–50 128

Sugar Industry in Pakistan in 1948–49 and 1949–50 ... 130

Comparative figures of Production, duration of season, sugar recovery, etc. for Indian Union and Pakistan 131

A Note on the production of sugar in other areas 131

CHAPTER 15: **Labour in Sugar Industry** **132–148**

Employment in Sugar Industry since 1929 132

Wages—A Brief Chronology since 1931–32 to 1949–50 ... 133

Bonus—A Brief History since 1931–32 to 1949–50 ... 132

Dearness Allowance 138

Trade Unionism in Sugar Industry 138

Number of strikes, workers involved, man-days lost since 1943 to 1949–50 139

Minimum Wages in Sugar Industry in U.P. and Bihar (1945–46 to 1948–49) 139

Conditions of Labour in Sugar Industry in U.P. during the seasons 1948–49 to 1949–50—an Official Note 141

Labour Legislation in 1950 147

CHAPTER 16: **World Sugar Situation** **148–157**

World Sugar Estimates by various sources vary considerably ... 148

World Sugar Production on the increase 149

Production Prospects for 1950–51 149

Cane Sugar Production nearly two-thirds of total World Sugar Output 150

Beet Sugar Production nearly one-third of World Sugar Output 151

Prospects for Centrifugal Sugar in 1950–51 153

World Sugar Consumption on the up-grade 153

F. O. Litch's Estimate of increase in consumption of sugar in the next five years 155

World Sugar Marketing Trends and International Agreements:

World Sugar Marketing trends 156

International Sugar Agreement 156

Commonwealth Sugar Agreement 157

APPENDIX: **List of Sugar Mills in the Union of India and Pakistan—Working and Projected in 1950** **1–32**

INDEX TO STATISTICAL TABLES IN THE SUGAR INDUSTRY ANNUAL, 1950

132 Tables

"SUGAR INDUSTRY AT A GLANCE"

Table No.	*Description*	*Page*
1.	Number of cane factories working in the Indian Union (including Hyderabad); Production of sugar from cane factories, gur refineries, and khandsari; Net imports of sugar in India during the last 19 years and estimates for the year 1950–51...	i
2.	Comparative growth of sugar factories in the various provinces since 1931–32	ii
3.	Number of sugar factories in various States working in 1949–50 actual quantity of cane crushed, sugar produced, recovery percentage obtained and average number of working days, etc.	ii
4.	Estimated total and *per capita* Consumption of sugar and gur in India from 1932–33 to 1950–51	iii
4-A	Estimated *per capita* expenditure on Gur and Sugar in India and total expenditure on Gur and Sugar from 1947–48 to 1950–51	iii
4-B	Total Annual Value (Approximate) of production of Gur and Sugar in India from 1946–47 to 1949–50	iv
5.	*Per capita* Consumption in some of the important countries of the world and retail prices of sugar	iv
6.	Yearly world production, consumption and carry-over of stocks of sugar (cane and beet) for the last 19 years	v
7.	Average and Maximum percentage of recovery of sugar in factories in India and Java from 1932–33 to 1949–50 ...	v
8.	Capacity of factories and Duration of Crushing Season in India from 1934–35 to 1949–50	vi
9.	Acreage under Sugarcane, under improved varieties, Production of cane per cane, Gross Production of Gur, and calculated Production of cane-crop from 1931–32 to 1949–50 ...	vii
10.	Percentage of cane used under different heads during the years 1933–34 to 1949–50	viii
11.	Percentage of cane crushed in factories to the total cane crop in various provinces from 1934–35 to 1949–50 ...	viii
12.	Cost of production of cane per maund in India	ix
13.	Estimate of total amount of money paid by Sugar factories to cane-cultivators and workers since 1932–33 to 1949–50 ...	ix
14.	Total import duty and excise duty on sugar in India in 1949–50, 1950–51 and 1951–52	x
15.	Excise Duty and Import Duty on Sugar, Sugar-candy and Molasses	xi

Table No.	Description	Page
16.	Yield of Revenue from Import Duty on Sugar in India from 1931–32 to 1949–50	xii
17.	Excise Duty on all Sugar produced in British India and Yield of Revenue therefrom from 1939–40 to 1950–51 ...	xii
18.	Average Price of Indian and imported sugar per maund of 82-2/7 lbs.	xiii
19.	Approximate average price of gur per maund from 1941–42 to 1950	xiii
20.	Approximate Official Estimate of Total Carry-over of Stocks of sugar in India at the beginning of November from 1931 to 1949	xiii
21.	Estimated percentage of Gate-cane to the total quantity of cane crushed in Factories in various provinces ...	xiv
22.	Statement showing Expenditure on sugar Research by the Indian-Central Sugarcane Committee from 1945–46 ...	xiv
23.	Yield of Cane and Sugar per Acre and Recoveries in different countries	xv
24.	Java Sugar Statistics from 1935–36 to 1950–51	xv
25.	Total Production of Molasses in India from 1932–33 to 1949–50	xvi
26.	Total Value of Sugar Machinery imported in India from 1932–33 to 1949–50	xvi
27.	Calculated Net Production of Gur in India for direct Consumption, from 1931–32 to 1950–51	xvii
28.	Cane Factory Production of Sugar in U.P., Bihar and All-India from 1931–32 to 1949–50	xvii
28-A	Total Production of Sugar by Central Sugar Factories in Provinces and States of the Indian Union from 1937–38 to 1949–50	xviii
29-A	Ex-Factory Price of Sugar as Fixed in 1949–50 by the Government of India and Sugar Price for 1950–51	xviii
29.	Minimum Sugarcane Prices and the Ex-Factory Prices of Crystal Sugar of E27 grade for the 1950–51 season in different States	xix
30.	Recovery of Sugar from Cane during 1937–38 to 1949–50 ...	xx
31.	Production of Sugar directly from cane in Modern Factories in India from 1929–30 to 1949–50 and Recovery percentage for Java upto 1938–39	xx
32.	An Interesting Table showing variations in *per capita* consumption of gur and sugar in certain Rural and Urban Areas in pre-war period (1937–38)	xxi
33.	Value of Imports of Sugar, Revenue from Imports, Rate of Import Duty on Sugar from 1925–26 to 1949–50 ...	xxii
34.	Final Forecast of Sugarcane and Acreage for the years 1947–48, 1948–49 and 1949–50 of the Indian Union and Pakistan ...	xxiii

Table No.	*Description*	*Page*
35.	Yields of Cane in different Provinces in 1943–44 ...	xxiv
36.	Estimated Consumption of Factory Sugar in the Indian Union during 1944–45 to 1946–47	xxv
37.	Calculated Net Production of Gur in the Indian Union by Provinces and States from 1943–44 to 1949–50 ...	xxv
38.	Wholesale Prices of Wheat, Rice, Sugar, Gur and Sugarcane in Bihar and U.P. from 1939 to 1950 with index numbers...	xxvi
39.	Statement showing the Technical Efficiency of Sugar Factories in India as compared to that in other countries ...	xxvii
40.	Export of Sugar from India (molasses included)	xxvi
41.	Technical Efficiency of Sugar Factories in different countries	xxviii
42.	World Sugar Industry—a comparative study showing yield per acre, Recovery per cent, Technical Efficiency, Production, Consumption, etc.	xxx
43.	Minimum Prices of Cane since 1943–44 and income from cane cess in different States in India, Co-operative Society's Commission, etc.	xxx
Nil.	Price Position in pre-war and Gur Control Periods and changes effected by the New Policy	xlv
Nil.	Ex-factory price of Sugar for E27 quality with schedules I, II, III and IV	li
Nil.	Minimum Prices of Gur for 1950–51 Season with the Schedule	lvi
Nil.	Ex-factory Prices of E27 quality for 1950–51 season in Madhya Bharat	lvii
Nil.	Proposed allocation of new units for further expansion in the Sugar Industry under the Government plan ...	lxxvi

CHAPTER 1

A.	State-wise Production of Sugar in the Indian Union in 1948–49 and 1949–50 with percentage variations	3

CHAPTER 2

A.	Sugar and Gur Production in 1947–48 to 1949–50 ...	6
B.	Average Gur Prices in U.P. and Bihar	7
C.	Percentage of Cane Crushed in Factories to total crop ...	8
D.	Khandsari Production in 1947–48 to 1949–50	8
E.	Average Prices of Gur, Sugar and Khandsari in 1949–50 ...	9
F.	Khandsari Production 1938–39 to 1949–50 and Production of Khandsari in Factories using Power	10
G.	Excise Duty Collected from Khandsari 1934–45 to 1949–50	10
H.	Gur Production in Seven top Districts in U.P. (1948–49 and 1949–50)	11
I.	Detailed Statement (II) of All-India Second Estimate of Sugarcane crop for 1950–51	14

Table No.	Description	Pages
	CHAPTER 3	
A.	Cane Prices per maund in different States in the Indian Union 1942-43 to 1950-51 ...	16
B.	Analysis of Prices of Sugar, Sugarcane and Gur during the period of Control, Decontrol, Re-control and Rationalised De-control from 1932 to 1950 ...	19
C.	Percentages of cane cost to total price of sugar from 1944-45 to 1950-51 ...	20
D.	Break-up of the Sugar price for 1950-51 season ...	21
E.	Statement showing the estimated and actual duration and recovery in U.P. and Bihar and the loss sustained by factories owing to variations in Estimates ...	25
	CHAPTER 4	
A.	Production costs, Profits, Share of Government and Cultivator in the cost of sugar Production for groups of years (1932-33 to 1950-51) ...	28
B.	Percentage of various items of cost of production to total Price of sugar ...	27
C.	Production costs, Profits and Taxes per maund of Sugar 1944-45 to 1948-49 ...	29
D.	Rise in Prices of Commodities in comparison to sugar ...	31
E.	Table showing how the scale of manufacturing charges varies with the crushing period ...	33
F.	Table showing how manufacturing charges vary inversely with sugar recovery ...	33
G.	Percentage Increase in different items of cost over pre-war level	34
H.	Government Estimate and Actuals regarding recovery and duration differ considerably ...	35
I.	Table Showing average profits of sugar factories in U.P. and Bihar in 1944-45 to 1946-47 ...	36
J.	Capital and Net Block of a few sugar companies and Dividends since 1938 ...	38
K.	Statement showing the Technical Efficiency of Sugar Factories in India as compared to that in other countries ...	40
L.	Wagons for Cane Transport for U.P. and Bihar ...	43
M.	Quantity of Cane supplied by Co-operative Societies and rate of commission per maund since 1947-48 ...	44
N.	Shares of Government, Cultivator and Workers in the Total value of Sugar Production (1938-39 to 1948-49) ...	45
O.	Total Value of Sugar Production 1938-39 to 1949-50 ...	45
P.	Estimate of Sugar Price in 1955, if our suggestions are implemented ...	47

Table No.	Description	Page
	CHAPTER 5	
A.	Percentages of cost of Sugar Production in India from 1932–33 to 1948–49	59
B.	Shares to Government and Cultivators in last 17 years of protection (1932 to 1949)	60
C.	Total Annual Value of Production of Sugar and Gur ...	62
	CHAPTER 6	
A.	Rate of Cane Cess in U.P. and Bihar (1938–39 to 1943–44) ...	64
B.	Statement showing the rate of cess, Total Income from Cess and Expenditure on Cane Development and Research ...	65
C.	Collection from Cess and Expenditure on Research ...	67
D.	Statement showing the Annual Expenditure of the Indian Central Sugarcane Committee from its normal funds ...	69
E.	Targets of Cane Yield under 10-year plan of development ...	71
F.	Expenditure on Cane Development in U.P. (1948–49 & 1949–50)	74
	CHAPTER 7	
A.	Average yield of cane-trash, filter press cake, etc. from sulphitation sugar factories in U.P., Bihar and India ...	76
B.	Table showing by-products of Sugar Industry	78
C.	Recovery of molasses percent cane since 1946–47 ...	78
	CHAPTER 10	
A.	Tariff Board (1950) Estimate of consumption of sugar ...	91
B.	*Per Capita* Expenditure on Sugar consumption, retail price of sugar and *per capita* consumption in different countries ...	93
C.	Utilization of Gur and Sugar	94
D.	Sugar requirements of Confectionery Industry in India ...	95
E.	Foreign imports of confectionery into India since 1935–36 ...	95
	CHAPTER 11	
A.	Increase in Yield as a result of parasite control in few States of India	99
B.	Area under Sugarcane and Foodcrops 1948–49 ...	108
	CHAPTER 12	
A.	Table of targets of cane yield per acre under 10-year plan ...	111
B.	Canes grown in U.P. in 1948–49	113
	CHAPTER 13	
A.	Cultivation costs of an ordinary Ryot per acre in Madras ...	122
B.	Average cost of Cultivation per acre in different States in India	124

Table No.	*Description*	*Page*
	CHAPTER 14	
A.	Sugar Production in Mysore in 1947–48 to 1949–50 ...	128
B.	Facts of Sugar Industry in Madras—1948–49 & 1949–50 ...	129
C.	Sugar Industry in India and Pakistan—a Comparison ...	131
	CHAPTER 15	
A.	Wages—a brief chronology since 1931–32 to 1949–50 ...	133
B.	Rate of Bonus in 1946–47 in U.P. and Bihar	135
C.	Rate of Bonus for 1947–48 in U.P.	135
D.	Revised Rate of Bonus for 1947–48 in U.P.	136
E.	Recommendations of Justice B. B. Prasad for 1948–49 Bonus in U.P.	136
F.	Number of Trade Unions registered and their Membership since 1945–46	138
G.	Number of Strikes, Workers involved, Man-days lost since 1943 to 1949	139
H.	Wage-level in U.P. in 1946–47 to 1948–49	139
I.	The Increases to wage bills on account of extra payments to labour in Bihar	140
J.	Schedule of Wages for 1948–49 in U.P.	142
K.	Bonus rate for U.P. for the year 1947–48	142
L.	Rate of Bonus for the year 1948–49 in U.P.	144
M.	Table giving details of work done by Works Committees in U.P. in 1949	146
N.	Number of cases dealt with by the U.P. Conciliation Board (Sugar) in 1949	147
O.	Statement showing the details of the strikes in sugar industry in U.P. in 1949	147
	CHAPTER 16	
A.	World Sugar (Beet and Cane) Production 1937–38 to 1950–51	150
B.	Country-wise Estimate of World Sugar Production and total cane and beet sugar production 1937–38 to 1950–51 ...	152
C.	World Production (by Continents) of Centrifugal and non-centrifugal sugars since 1935–36 to 1950–51	154
D.	F. O. Licht's Estimate of increase in World Sugar Consumption in next Five Years.	155
	APPENDIX	
	List of Sugar Mills in Indian Union States with their daily crushing capacity, etc.	1–30
	List of Sugar Mills in Pakistan with their daily crushing capacity, etc.	30–31
	Geographical Distribution of Sugar Mills in the Union of India (1950)	32
	Geographical Distribution of Sugar Mills in Pakistan (1950) ...	32

PREFACE

"Mahatma Gandhi was not against controls. He said, 'Take away controls after building reserves. If I have in my granaries enough food to throw where prices rise, then can I withdraw controls'. Mahatma Gandhi was a scientific man. He was a perfect 'Bania'. He knew what he was saying."

Thus observed Acharya Shri J. B. Kripalani at the recent All-India Political Convention held at Patna in June 1951. If one looks unbiassed at the new sugar policy adumbrated by the Hon'ble Shri K. M. Munshi, Minister for Agriculture and Food, on December 1, 1950, even an unrelenting critic of the Government will have to admit that the Hon'ble Minister has shown a commendable courage of conviction in very rightly following the Mahatma by successfully putting into practice his re-orientated policy of "decontrol of sugar after building up reserves".

There is no gainsaying the fact that the sugar policy of a judicious mixture of free marketing and rationing has not only succeeded immensely, but shown the way for solving other similar problems of shortages in other spheres in the country to eliminate black-marketing, as well as other evils associated with control. The sugar production in the country, which had come down to 9.75 lakh tons from 10 lakh tons, stands increased by over 12 per cent of the previous year's production, to over 11 lakh tons this season. Government of India have, as such, permitted releases of extra production above 107 per cent of the previous two years' production after building up a reserve for the minimum requirement of 10 lakh tons for statutory rationing purposes. Sugar in extra quantity has thus been available since March 10, 1951, in the free market, to those who need it, and this has also prevented the tendency of hoarding sugar, as it is a common human psychology not to hoard if the commodity is reported to be available. Black-market in sugar has disappeared, and become a thing of the past, and free sugar is retailed, fairly freely, albeit at prices higher than the price of rationed sugar, but considerably lower than the black-market prices in the last season. It is to be noted, however, that with increased releases of sugar for free market sales, sugar price is gradually adjusting itself to the operation of the law of supply and demand. Normal working of the economic machinery, so far as sugar is concerned, has become a living reality within about 4 months of the launching of the new sugar policy. It has to be admitted that the policy

of decontrol of sugar after building up a minimum reserve has met with such tremendous success that we feel encouraged to recommend that it should be extended to other commodities such as textiles, other manufactured products, and even foodgrains, with a view to create attractive conditions for enhanced production, and consequently abolition of shortages and elimination of black-marketing. Food problem apart, the Hon'ble Shri K. M. Munshi, deserves a high word of praise for his foresight in launching the new sugar policy, amending it with resourcefulness, and carrying it successfully through.

The policy is based on the principle of offering the necessary incentives to producers with proper safeguards for security of the minimum required for rationing requirements and satisfaction to the consumers. Had the incentive of free market sale been absent, it is doubtful whether the price-policy of sugar could have at all succeeded. Had there been no provision for securing the reserves to guarantee minimum requirement of 10 lakh tons to the people first, before permitting free market sales of sugar, it is doubtful whether even after achieving higher production than that of the previous year, black-market in sugar could have at all disappeared, and there would have been any occasion for satisfaction to the consumers.

In a State where black-market has been the creation of control as well as of decontrol, the policy of building reserves for minimum requirement before decontrol of the excess production appears to be the surest way for abolishing black-market. The experiment which has proved a definite success in sugar should go a long way to embolden the Government of India to extend it to other commodities too, forthwith, and to restore normal operation of the economic activity in the country. It is the first step towards abolition of rationing which is disliked by a large section of the population and which, in its trail, has brought in an era of queues, which in their turn have accounted for a lot of wastage of human energy—not to speak of multifarious other difficulties. It also opens out possibilities of export, by creating conditions for increased production under a system of proper incentives, vitally essential in a profit-motive economy.

The salient features of the new sugar policy are given in detail in the " Sugar Industry At A Glance " Section in this *Annual* on pages xlix to lv, the evolution of the new policy being dealt with in earlier pages in the same section.

Among the directions which have been suggested in this *Annual* for improving conditions of sugar factories and enhancing production, and which deserve a close examination, are :

(1) Provision of land for cultivation of cane in the vicinity of factories,

(2) Zoning of areas,

(3) Shifting of factories to less concentrated areas,

(4) Increasing *per capita* yield of cane, and

(5) Continued enforcement of control over gur and khandsari.

Special Features of this Annual

Like the new sugar policy of the Government of India, we have also re-orientated this year the method of presentation of facts, statistics, and comments relating to the industry. Unlike our past *Annuals*, the present one is divided into Chapters, and detailed contents both of the matter as well as of tables have been provided to facilitate quick reference. Many tables on estimated valuation of sugar and cane production, sugar consumption, *per capita* consumption and imports of sugar, cost of cultivation, etc. are provided. We have made new additions to World Sugar Industry statistics giving a comparative study. So also we have tried to give comprehensive information on sugar industry in different States in India and Pakistan, and on labour in the sugar industry as well as on labour legislation, etc.

We have no doubt that all this will meet with due appreciation.

Acknowledgment and Thanks

We take this opportunity of thanking the Director of the Indian Institute of Sugar Technology, Kanpur, for the prompt help he has rendered to us, as well as to Shri N. L. Dutt, Government Sugarcane Expert of the Indian Central Sugarcane Committee, Sugarcane Breeding Station, Coimbatore. We are also thankful to the Cane Commissioners for the U.P. and Bihar, the Indian Sugar Mills' Association, Shri W. R. Natu, Statistical Adviser, Agriculture Ministry, Shri Gajanan Naik, Palm-Gur Adviser, other cane-research officers, as also the Ministry of Food and Agriculture at the Centre, for the help they have rendered to us in maintaining this publication authoritative, reliable and up-to-date, so that it could be made use of safely by anyone needing reliable and up-to-date information regarding the industry.

We would be failing in our duty, if we did not acknowledge the very great and generous assistance we have received from Shri O. N. Misra, Chairman, Sugar Commission, U.P. and Bihar, particularly as after taking considerable trouble, he has given us much authoritative material on the industry. It has helped very materially in adding to the value and authoritativeness of this *Annual*. We have to acknowledge the unfailing assistance received from the Indian Central Sugarcane Committee, the Directors of Industries, and particularly from Shri N. T. Mone, I.C.S., Joint Secretary, Ministry of Agriculture, who has provided us with much valuable information and up-to-date statistics.

We greatly regret the unusual delay in the publication of this year's *Annual*, due to the constant changes in the Government's new policy regarding sugar which was fluctuating greatly in the initial period, and we felt it would not be so useful to readers if the *Annual* were presented when the policy had not steadied itself. We hope readers will appreciate this. We expect to publish the 1951 *Annual* by the end of December 1951.

C/o Gandhi & Co.,
Jan Mansion,
Sir Pherozshah Mehta Road,
Fort, Bombay.
21st June 1951.

M. P. GANDHI
Editor : Sugar Industry *Annual.*

FURTHER CONCESSION FOR SUGAR FACTORIES IN FREE SALES OF SUGAR.

New Delhi : 14th June 1951 : Sugar Factories which have produced more than their basic quota of sugar will be allowed half of their excess production for free sale, it was officially announced.

Factories which have been allowed a part namely, less than half of their excess production for free sale, will now be allowed a further quantity to make their free sale quota equal to half of the excess production. The position of factories which have already been allowed under the existing formula more than half of their excess production, will of course remain unaffected, the announcement adds.

How these additional quantities should be released for free sale is under consideration. Meanwhile releases will be given to all factories which have produced in excess 15 per cent over their basic quota up to the excess produced.

STATISTICAL SECTION IN

"THE SUGAR INDUSTRY AT A GLANCE" (1950)

(Revised upto 15th March 1951)

TABLE No. 1

Number of cane factories working in the Indian Union (including Hyderabad); Production of sugar from cane factories, gur refineries, and khandsari; net imports of sugar in India during the last 19 years and estimates for the year 1950-51

Year (November-October)		Number of cane factories working in Indian Union	Cane factory Production (November-October)	Sugar Refined from Gur (Jan.-Dec.) (Estd.)	Khandsari Production Estimates (Nov. Oct.)	Total Production of Sugar in India	Net Imports (excluding re-exports) of Sugar in India (Nov. Oct.)
1		2	3	4	5	6	7
			Tons	Tons	Tons	Tons	Tons
1931-32	...	32†	159,580†	62,000†	250,000†	471,000†	586,000†
1932-33	...	57†	290,000†	80,000†	275,000†	645,000†	389,730†
1933-34	...	112†	454,000†	64,900†	200,000†	718,900†	310,460†
1934-35	...	130†	578,100†	43,500†	150,000†	771,600†	311,139†
1935-36	...	137†	932,100†	47,900†	125,000†	1,105,000†	142,180†
1936-37	...	137†	1,111,400†	25,600†	100,000†	1,237,000†	24,030†
1937-38*	...	131	914,600	17,200	115,200	1,047,000	21,648†
1938-39*	...	132	642,200	14,700	92,100	749,000	331,400†
1939-40*	...	138	1,207,800	26,500	114,500	1,348,800	66,836†
1940-41*	...	140	1,046,100	42,000	183,800	1,271,900	43,217†
1941-42*	...	141	751,400	19,900	91,500	862,800	30,451†
1942-43*	...	141	1,051,800	7,800	195,900	1,255,500	8†
1943-44*	...	145	1,200,700	7,700	137,300	1,345,700	14†
1944-45*	...	136	942,200	6,400	114,700	1,063,300	30†
1945-46*	...	138	922,900	4,100	106,800	1,033,800	...
1946-47*	...	135	901,100	4,000	96,700	1,001,800	...
1947-48*	...	134	1,074,800	4,000	105,000	1,183,800	14,389*
1948-49 (b)	...	134	1,007,500	4,000	113,000	1,007,500	...
1949-50 (b)	...	139	975,400	4,000	175,000	1,154,400	5,550(a)
1950-51 (Our Est.)	...	139	1,075,000 (Est.)	4,000	125,000	1,204,000	54,500(a)

† These figures refer to undivided India *vide* our Sugar *Annual* 1949.

* These figures from 1937-38 to 1947-48 in columns 2, 3, 4, 5, 6, except col. 7 are *vide* "Indian Trade Journal", June 1, 1950 and refer to the Indian Union.

(b) These figures are furnished by the Director of Indian Institute of Sugar Technology, Kanpur, *vide* letters dated 6-11-50 and 7-2-51.

(a) Government purchased 60,050 tons from U.K. (60,000 tons at the rate of £56 to £62 per ton) and U.S.A. (50 tons at the rate of $6.5 per 100 lbs.) at a total estimated value of Rs. 4,32,35,840. Out of this quantity only 5,550 reached India in 1949-50 (before Nov. 1950). In February 1951 it was announced by the Deputy Minister for Food that Government had no intention to import more in 1951 except the balance 32,060 tons, 28,000 tons having reached India before February 1951.

TABLE No. 2

Comparative growth of Sugar Factories in the various Provinces since 1931-32

(No. of cane-factories Working)

Figures from 1946-47 onwards relate only to the Indian Union.

Name of Province as in 1946-47	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50
U.P. ...	14	33	59	65	67	68	68	69	70	70	70	71	70	67	67	65	63	65	66
Bihar ...	12	19	33	34	35	33	33	32	32	32	31	31	31	29	29	29	29	29	30
E. Punjab	1	1	5	6	4	5	3	3	3	4	4	4	2	2	3	10	1	1	1
Madras ...	2	2	4	8	8	11	8	7	10	11	11	10	12	11	11	11	11	10	11
Bombay ...	2	1	4	5	8	6	7	7	7	8	10	9	10	10	10	9	10	10	14
W. Bengal & Assam	...	...	2	5	6	6	6	8	9	9	9	8	6	4	7	2	2	1	1
Orissa ...	.	..	...	...	...	...	2	2	2	2	2	2	2	1	1	1	1	1	2
Indian States ...	...	..	4	5	9	8	9	11	11	12	13	15	18	16	17	11	17	17	14*
Total for India ..	32	57	112	130	137	137	136	139	145	148	150	150	151	140	145	135	134	134	139

* Refers to factories in Raj Pramukh States and Chief Commissioner's States.

TABLE No. 3

Number of Sugar Factories in various States working in 1949-50, actual quantity of cane crushed, Sugar produced, recovery percentage obtained and average number of Working Days, etc.*

States	No. of factories working	Average No. of working days	Total cane crushed (In	Total sugar made thousand	Total molasses made Tons)	Recovery of sugar % cane	Recovery of molasses % cane
East Punjab ...	1	117	95	9	3	9.73	3.21
Uttar Pradesh ...	66	90	5,277	509	184	9.64	3.48
Bihar ...	30	98	2,241	222	79	9.91	3 52
Madras ...	11	89	611	59	26	9.61	4 17
Bombay ...	14	116	937	111	34	11.84	3.64
W. Bengal & Assam	1	66	32	3	1	10.55	4.07
Orissa ...	2	43	21	2	1	9.22	5.46
Chief Commissioner's States ...	2	64	57	5	2	8.96	4.23
Raj Pramukh's States ...	12	70	592	56	26	9.38	4.33
Total ...	139	91	9,863	976	356†	9.89	3.60

* *Vide* Letter No. 8531/Stat dated 7-2-1951 from the Director of Indian Institute of Sugar Technology, Kanpur.

† The actual figure was 3,55,400 tons.

TABLE No. 4

Estimated Total and Per Capita Consumption of Sugar and Gur in India from 1932-33 to 1950-51

Year (Nov.—Oct.)	Consumption of Sugar (Tons)	Estimate of Population (Millions)	Consumption of Gur (Tons)	*Per Capita* Consumption		
				Sugar (Lbs). per head	Gur (Lbs). per head	Total Gur and Sugar (Lbs)
1932–33	1,006,000	......	3,240,000	6.3	20.2	26.5
1933–34	996,000	......	3,486,000	6.1	21.5	27.6
1934–35	1,059,000	......	3,701,000	6.5	22.6	29.1
1935–36	1,074,000	......	4,101,000	6.5	24.8	31.3
1936–37	1,167,000	......	4,268,000	7.3	26.7	34.0
1937–38	1,159,000	......	3,364,000	7.2	20.9	28.1
1938–39	1,073,000	......	2,131,000	6.6	13.1	19.7
1939–40	1,019,100	......	2,441,000	6.4	18.0	24.4
1940–41	1,100,000	319.00	3,414,000	6.7	20.6	27.3
1941–42	1,132,000	322.19	2,829,000	6.6	18.5	25.1
1942–43	916,000	325.28	3,015,000	5.9	18.1	24.0
1943–44	1,046,480	328.37	3,499,000	6.5	23.8	30.3
1944–45	1,236,000	331.46	3,633,000	8.0	22.1	30.1
1945–46	1,048,000	334.55	3,553,000	6.0	22.0	28 0
1946–47	977,000	337.64	3,574,000	5.9	22.0	27.9
1947–48	950,000*	340.73	3,492,000	5.8	21.9	27.7
1948–49	1,000,000*	343.82	2,830,000	6.5	22.0	28.5
1949–50	1,154,400*	347.01	2,714,000	7.0	23.0	30.0
1950–51 (Est)	1,204,000	351.01	3,900,000	7.6	23.0	31.6

* The total value of sugar, including gur, available for civil consumption in the year 1946-47 may be estimated at about Rs. 218 crores, for 1947-48 at Rs. 254 crores for 1948-49 at Rs. 206 crores, and in 1949-50 at Rs. 262 crores. To the total value of home production must be added the price of imported quantities. Out of a total of 29,160 tons imported from Cuba in 1947-48, only 14,471 tons were available for consumption in India and out of a total purchase of 60,050 tons from U.K. and U.S.A. only 5,550 had arrived in 1949-50 and were available for consumption during the period. The total unshipped quantity by 12th February 1951 was reported to be 40,000 tons. Imported sugar retained in the country in 1947 was about 15,000 tons, valued at Rs. 75 lakhs, and the value of 5,500 tons imported in 1949 was Rs. 40 lakhs. The total value of the sugar purchased by India for imports in 1949-50 and 1950-51 was Rs. 432,35,840. The total valuation of gur and sugar in India is given in Table No. 4B below. While evaluating consumption, exports of sugar must be deducted. The exports in 1949-50 were 7,184 tons of the value of about Rs. 37,21,312 at Rs. 28-8-0 per maund (India value).

TABLE No. 4-A

Estimated Per Capita Expenditure on Gur and Sugar in India and Total Expenditure on Gur and Sugar from 1947-48 to 1950-51

Year	Retail Prices of		Per Capita Consumption of		Total Expenditure on Gur and Sugar per head (Approx.)
	Sugar Average	Gur Average	Sugar	Gur	
	Rs. a. p.	Rs. a. p.	lbs.	lbs.	Rs. a. p.
1947–48	0 7 0	0 5 0	5.8	21.9	9 5 0
1948–49	0 12 0	0 8 0	6 5	22.0	15 14 0
1949–50	0 6 9	0 5 0	7.0	23.0	10 2 3
1950–51	0 6 9	0 5 0	7.6	23.0	10 6 3

The total expenditure by sugar consumers in India on the basis of the population in India as 340 millions in 1947-48, 343 millions in 1948-49, 347 millions in 1949-50 and 351 millions in 1950-51 and on the basis of the *per capita* expenditure as given in this table No. 4A, works out to Rs. 318 crores in 1947-48, Rs. 546 crores in 1948-49, Rs. 351 crores in 1949-50 and Rs. 362 crores in 1950-51 approximately.

TABLE No. 4-B

Total Annual Value (approximate) of Production of Gur and Sugar in India from 1946-47 to 1949-50

Year	Production in lakh tons		Average Price of				Total Value Rs. Crores		
			Sugar		Gur				
	Sugar	Gur	Per maund	Per Ton	Per maund	Per Ton	Sugar	Gur	Total for Sugar & Gur
			Rs. a. p.	Rs.	Rs.	Rs.			
1946–47	9.01	35.74	22 11 0	635	16	450	57	161	218
1947–48	10.7	34.92	35 7 0	994	16	450	108	146	254
1948–49	10.07	28.30	28 8 0	740	16	450	79	127	206
1949–50	9.75	27.14	29 8 0	740	25	700	73	189	262

TABLE No. 5

Per Capita Consumption in some of the important countries of the world and Retail Prices of Sugar

(Figures in lbs.)

Name of the country	Per capita consumption			Prices in annas per lb. (retail) as on March 1949 (b)
	Pre-war Average	1948 (a)	1949 (March) (b)	
Argentina ...	......	78.2	71.9	2.51
Australia ...	116	129.9	114.5	3.17
Brazil ...	34	66.8	51.7	4.59
Cuba ...	88	65	82.1	4.23
Czechoslovakia ...	......	52.9	55.6	7.2
Denmark ...	......	85.9	128.9	2.5
Egypt ...	......	22.0	20.4	5.45
Finland ...		55 1	67.7	9.7
France ...	52	42.7	57.1	8.39
Greece ...	......	15.9	27.2	11.75
Hungary ...	......	28.6	28.2	12.26
India ...	30	7.1†	24.3‡	6.50
Italy ...	64	20.0	21.3	11.27
Netherlands ...	64	73.5	......	......
New Zealand ...	......	109.9	11.58	5.47
Norway ...	......	56.6	77.4	3.01
Poland ...	......	40.2	29.8	10.5
Spain ...	......	11.1	17.2	15.50
Switzerland ...	......	79.3	85.1	5.97
Turkey ...	......	16.0	14 9	14.78
Un. of S. Africa ...	47	90.3	58.6	3.63
U. K. ...	106	86.3	112.6	4 44
U. S. A. ...	97	93.3	103.2	5.03
U. S. S. R. ...	......	16.4	......	......
Java ...	11	......	......	......
Japan ...	33	......	29.1	11.55
Canada ...	......	......	102.9	4.81
Germany ..	52	......	63.3	1.65
Pakistan ..	......	......	24.3‡	7.47

(a) *Vide* U.S. Dept. of Agriculture, Production and Marketing Administration Report in Lamborn's "Sugar Market Report", 1950.

(b) *Vide* Indian Sugar Manual, 1949, of the S.T. Association of India.

† According to Indian Sugar Statistics of the Economic Adviser, Ministry of Agriculture, the *per capita* consumption in 1948-49 was 7.8 lbs. of crystal sugar in addition to 23 lbs. of Gur (*vide* M. P. Gandhi's *Annual*, 1949).

‡ This represents figure for both gur and sugar (*vide* Indian Sugar Manual, 1949).

TABLE No. 6

Yearly World Production, Consumption and the Carry-over of Stocks of Sugar (Cane and Beet) for the last 19 years (in thousand long tons)*

Crop year (Sept. 1st to Aug. 31st)	Opening Stocks (Sept. 1st.)	Production (Cane & Beet)	Consumption	Closing Stocks (Aug. 31st)	Percentage relation of stocks to Consumption
1932-33	12,069	24,692	26,193	10,568	40.3
1933-34	10,568	25,709	26,287	9,990	38.0
1934-35	9,990	26,191	27,188	8,993	33.1
1935-36	8,993	28,846	29,231	8,608	29.5
1936-37	8,608	30,818	30,549	8,877	29.1
1937-38	8,877	30,967	29,647	10,269	34.4
1938-39	10,197	29,478	29,406	11,471	34.9
1939-40	10,269	31,094	26,551	...	38.8
1940-41	...	30,916	...	...	...
1941-42	...	28,563	...	...	...
1942-43	...	29,095	...	...	...
1943-44	...	27,099	...	...	...
1944-45	...	23,412	..	...	...
1945-46	...	22,588	21,000 Est.	...	...
1946-47	...	28,489	...	...	...
1947-48	...	29,833	27,556**	...	...
1948-49	...	32,912	29,728**	...	...
1949-50	...	31,391	...	...	...
1950-51	...	34,025	...	...	...

Figures are in long tons (Long ton = 2,240 lbs.), (Metric ton = 2,205 lbs.), and (Short ton = 2,000 lbs.).

* *Vide* Lamborn's Sugar Reports, International Sugar Journal, F. O. Licht, Willet & Gray etc. for figures of production. Also Czarnikow Ltd., London.

** F. O. Licht.

TABLE No. 7

Average and Maximum percentage of recovery of Sugar in Factories in India and Java from 1932-33 to 1949-50

Year	*India* Average	*U.P.* Average	*Bihar* Average	*Bombay* Average	*Java* Average	*India* *Maximum*
1932-33	8.66	8.55	8.60	10.00	11.56	10
1933-34	8.80	9.08	8.32	10.00	12.84	10
1934-35	8.66	8.56	8.79	10.37	12.55	11.10
1935-36	9.29	9.60	8.93	10.47	13.23	11.34
1936-37	9.50	9.65	9.20	10.68	12.77	11.43
1937-38	9.38	9.18	9.58	10.97	11.87	11.63
1938-39	9.29	6.14	9.00	11.29	11.77	12.25
1939-40	9.45	9.37	9.29	10.97	12.23	12.31
1940-41	9.70	9.87	9.86	9.94	...	11.15
1941-42	9.69	9.87	10.35	9.87	...	12.45
1942-43	10.28	10.16	10.93	10.64	...	13.35
1943-44	10.02	9.92	10.53	10.98	...	12.84
1944-45	10.21	10.20	10.69	10.79	...	11.84
1945-46	10.09	10.09	10.49	10.97	...	12.28
1946-47	9.88	10.03	10.08	10.30	...	13.46
1947-48	9.85	9.80	10.49	11.05	...	11.93
1948-49	9.97	9.93	10.34	10.83	...	12.53
1949-50	9.89	9.64	9.91	11.84	...	13.10

Statistics after 1946-47 are for the Union of India.

TABLE No. 8

Capacity of Factories and Duration of Crushing Season in India

Average Cane-crushing capacity of Factory (calculated on the basis of tons of cane crushed per day of actual working) in India		*Maximum* Cane-crushing capacity of Factories per day in India	
Year	Tons	Year	Tons
1934-35	517	1934-35	2,012
1935-36	568	1935-36	1,807
1936-37	630	1936-37	1,960
1937-38	660	1937-38	2,000
1938-39	630	1938-39	1,850
1939-40	710	1939-40	1,960
1940-41	690	1940-41	1,980
1941-42	640	1941-42	1,800
1942-43	690	1942-43	1,920
1943-44	708	1943-44	1,903
1944-45	681	1944-45	1,940
1945-46	697	1945-46	1,927
1946-47	738	1946-47	1,967
1947-48	742	1947-48	1,877
1948-49	740	1948-49	1,957
1949-50	775	1949-50	2,203

Duration of Cane-crushing Season (October-May)	Number of Days of the Crushing Season													
	1936-37	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50
Mean duration of Cane-crushing season in *All-India* ...	138	112	83	129	113	85	101	117	98	94	94	110	101	91
Maximum duration of Cane-crushing season in *All-India* ...	203	181	184	203	264	313	278	255	232	185	169	198	341	162
Mean duration of Cane-Crushing season in *U.P.* ...	140	124	77	133	100	78	112	131	98	96	97	114	98	90
Mean duration of Cane crushing season in *Bihar* ...	150	99	79	136	100	54	96	93	78	79	70	76	84	98
Mean duration of Cane-crushing season in *Bombay* ...	...	...	...	...	...	...	...	...	...	120	131	142	...	...
Mean duration of Cane-crushing season in "*All-other States*"	138	103	97	119	144	117	89	110	111	95	95	123	116	89

TABLE No. 9

Acreage under Sugarcane, under Improved Varieties, Production of Cane per acre, Gross Production of Gur, and Calculated Production of Cane-crop * from 1931-32 to 1949-50

Year	Total Acreage under sugar-cane (In 1000 acres)	Acreage under Improved Varieties (In 1000 acres)	Average Cane Production Per acre (Tons)*	Gross Production expressed as gur (In 1000 tons)**	Calculated Production of sugarcane in 1000 tons†
1931-32 ...	3,076	1,170	14.1	4,116	43,316
1932-33 ...	3,425	1,841	14.9	4,859	51,129
1933-34 ...	3,422	2,295	15.3	5,055	52,455
1934-35 ...	3,602	2,433	15.1	5,292	54,346
1935-36 ...	4,154	3,056	15.3	6,102	61,202
1936-37 ...	4,586	3,452	15.6	6,932	67,322
1937-38 ...	3,997	2,968	15.5	5,579	46,450
1938-39 ...	3,270	2,673	15.0	3,572	36,066
1939-40 ...	3,788	2,526	15.0	4,849	39,472
1940-41 ...	4,749	3,084	15.0	5,992	51,066
1941-42 ...	3,671	2,321	15.0	4,549	37,824
1942-43 ...	3,755	2,647	15.0	5,323	45,329
1943-44 ...	4,389	3,121	13.8	6,063	51,867
1944-45 ...	4,305	3,184	13.2	5,679	48,661
1945-46 ...	3,825	2,968	14.0	5,416	46,117
1946-47 ...	3,528	N	13.9	4,913	49,769
1947-48 ...	4,056	N	14.3	5,817	53,327
1948-49 ...	3,791	N	13.3	4,993	......
1949-50 ...	3,641 (a)	N	13.5	4,904	53,200‡
1950-51 ...	3,922 (b)	N	......	......	......

N.B.—All figures revised *vide* Final Sugarcane Forecast for 1950-51 and 1949-50.

* All figures revised *vide* letter from the Economic and Statistical Adviser, Government of India, dated 10-8-50.

** Raw gur production is one-tenth of actual cane production (*vide* Note, Economic and Statistical Adviser, dated 10-8-50).

N = Information beyond 1946-47 is not available since it is considered that most of the acreage under sugarcane has been under Improved Varieties.

‡ *Vide* Dy. Minister for Agriculture. According to him the total value of sugarcane in 1949-50 was Rs. 250 crores at Rs. 47-8-0 per ton.

(a) *Vide* Second Adjusted Estimate for 1949-50 by the Director of Economics and Statistics published in February 1951.

(b) *Vide* Second Estimate by the Director of Economics and Statistics published in February 1951.

† *Vide* Indian Trade Journal, June 1, 1950.

TABLE No. 10

Percentage of Cane used under different heads during the years 1933-34 to 1949-50 (November-October)

	1933–34	1934–35	1935–36	1936–37	1937–38	1938–39	1939–40	1940–41	1941–42	1942–43	1943–44	1944–45	1945–46	1946–47	1947–48	1948–49	1949–50
											[Our	Est	imat	e]			
Cane used in Factories ...	9 8	12.3	16.0	17.6	17.8	16.2	27.7	19.1	21.2	25.0	25.0	20.0	20.0	19	21	22	22
Cane equivalent to *gur* used in refineries ...	2.0	1.2	1.4	0.5	0.5	0.5	0.9	1.4	1.4	1.0	1.0	1.0	1.0	1	1	1	1
Cane used for *gur* manufacture ...	65.5	66.0	63.8	64.9	62.0	64.0	51.4	57.7	53.4	50.0	50.0	55.0	55	55	54	55	55*
Cane used for other purpose, including *Khandsari*, Chewing sets for planting, etc. ...	22.7	20.5	18.8	16.9	19.7	19.3	20.0	21.8	24.0	24.0	24.0	24.0	24.0	25	24	22	22
Total percentage ..	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

* *Vide* Letter No. 6390/Stat dated 6-11-1950 from Director, Indian Institute of Sugar Technology, Kanpur.

TABLE No. 11

Percentage of Cane crushed in Factories to the total Cane-crop in various Provinces † from 1934-35 to 1949-50

Season	U.P.*	Bihar*	Bombay	Bengal	Madras	India
1934–35	13.6	30.9	8.0	2.7	5.0	12.3
1935–36	17.1	40.4	11.0	4.8	5.4	16.0
1936–37	17.1	49.3	13.0	5.2	6.0	17.6
1937–38	18.6	62.3	14.0	...	...	17.8
1938–39	14.5	44.5	...	...	...	19.5
1939–40	25.5	48.4	...	...	...	27.7
1940–41	13 9	29.3	...	...	...	19.1
1941–42	14.6	...	...	...	...	21.2
1942–43	21.9	...	...	...	...	25.0
1943–44	25.7	—	...	...	...	25.0
1944–45	21.2	43 0	...	...	...	19.49
1945–46	22.6	42.2	...	...	...	20.19
1946–47	21.7	37.4	...	...	...	18.55
1947–48	22.98*	46.55*	...	...	...	18.52*
1948–49	22.14*	72.22*	...	...	...	20.21*
1949–50	19.12*	80.76*	...	...	...	19.89*

† Figures are based on Cane Development Department (U.P.) statements showing dispersal of cane crop in U.P. and on letters from the Cane Commissioner, U.P., to Chairman, Sugar Commission, U.P. and Bihar, and Director of Indian Institute of Sugar Technology, for 1947 and earlier years.

* *Vide* letter No. 6390/Stat from the Director of Indian Institute of Sugar Technology dated 6-11-50.

TABLE No. 12

Cost of Production of Cane per maund in India

(a) Definite figures are not available. Cost of production varies from Province to Province from annas 0-3-0 to annas 0-7-0 per maund. (*Vide* 1939 Annual.)
(b) Enquiry undertaken by the Imperial Council of Agricultural Research in 1934, was concluded in 1938. Reports of cost in various Provinces were published in 1938 and 1939, and also referred to in Tariff Board's Report of 1937.
(c) Cost considerably increased since 1942, due to inflation, and soaring up of general price level. Consequently, minimum price of cane increased to Rs 2 per maund in U.P. and Bihar in 1947-48, reduced to Re. 1-10-0 in 1948-49 in U.P. and Re. 1-13-0 in Bihar, and fixed at Re. 1-10-0 in 1949-50 in U.P., and Re. 1-10-9 in Bihar.
(d) Summary enquiry undertaken by a Technical Committee on Sugarcane in 1949. Results not yet published.
(e) The average cost of cultivation of cane, according to the figures published in 1948-49 by the Indian Central Sugarcane Committee, can be taken to be roughly as follows in various sugarcane growing States:

State	Total Cost per acre in Rs.	Average yield per acre in Maunds	Average Cost of cultivation per maund of cane Rs.
United Provinces—			
1. Western	596 15 0	490	1 4 0
2. Central	562 9 0	470	1 3 2
3. Eastern	512 13 0	430	1 3 1
Bihar	566 12 0	380	1 7 10
Madras	1,130 7 7	1,053	1 1 2
Bombay	1,151 10 0	1,120	1 0 6
C.P.	503 8 0	300	1 10 10
Orissa	580 0 0	500	1 2 7
E. Punjab	471 0 0	350	1 5 3
W. Bengal	861 0 0	528	1 10 1

TABLE No. 13

Estimate of Total Amount of Money paid by Sugar Factories to Cane-cultivators and Workers since 1932-33 to 1949-50

Season	Estimated average price per maund of cane in U.P. and Bihar	Estimated amount paid for cane by factories to Cultivators	No. of unskilled workers employed (1)	Estimated amount of wages paid to unskilled workers (2)
		(*Figures in OOO's*)		
	Rs. a. p.	Rs.	No.	Rs.
1932-33	0 5 6	3,14,39	29	1,778
1933-34	0 5 6	4,83,98	67	4,032
1934-35	0 5 3	5,97,66	78	4,680
1935-36	0 5 3	8,81,03	82	4,932
1936-37	0 4 5	8,92,19	100	6,000
1937-38	0 5 1	1,57,53	100	6,000
1938-39	0 6 10	8,13,00	100	6,000
1939-40	0 8 5	18,81,09	100	7,000
1940-41	0 4 8	8,96,40	100	5,650
1941-42	0 7 0	6,15,00	100	4,000
1942-43	0 10 0	13,00,00	100	5,000
1943-44	0 12 0	18,00,00	100	5,500
1944-45	0 14 0	23,00,00	90	6,200
1945-46	0 15 0	24,58,00	100	6,600
1946-47	1 4 0	33,00,00	130	9,000
1947-48	2 0 0	61,00,00	130	11,000
1948-49	1 11 6	50,00,00	130	12,000
1949-50	1 11 0	45,36,98	130	13,000

Note.—The amount received by U.P. cane-growers from factories was about Rs. 25 crores in 1948-49 and by Bihar cane-growers Rs. 9 crores, and in 1949-50, it was Rs. 24 crores in U.P. and Rs. 10 crores in Bihar.

(1) Based on an assumption of an average factory employing about 600 workers.

(2) Based on an estimate of payment of 0-8-0 per day (upto 1941-42), and on the average working period of the season. After 1941-42, the estimate is on a 25 per cent higher basis.

(3) Dearness and allowances were increased by 50 per cent in 1942-43 and 1943-44 and have also been still more in 1945-46, 1946-47, 1947-48, 1948-49, and 1949-50. Minimum wages increased considerably since 1946-47.

TABLE No. 14

Total Import Duty and Excise Duty on Sugar in India in 1949-50, 1950-51 and 1951-52

Year	Total Import Duty on Imported Sugar	Excise duty on indigenous Factory* Sugar
1949-50 (From 1st March 1949 till 31st March 1950)	*Total Import Duty* = *Rs.* 12-9-7 per *cwt. equivalent* to Rs. 9-4-0 per maund. (This is including Protective Duty (Rs. 6-12) plus 20% surcharge on it and including equivalent excise duty (Rs. 3-12-0) plus 20% surcharge on it.)	Rs. 3-12-0 per cwt. (which is equivalent to Rs. 2-12-1 per maund).
1950-51 (From 1st April 1950 *to* 28*th February* 1951)	Total Import Duty = Rs. 12-9-7 per cwt. equivalent to Rs. 9-4-0 per maund. (*This is including Revenue Duty Rs. 6-12 per cwt.* equivalent to Protective duty plus 20% surcharge plus Excise duty, Rs. 3-12-1 per cwt. plus 20% surcharge on it).	Rs. 3-12-0 per cwt. which is equivalent *to* Rs. 2-12-1 *per* maund.
1951-52 (From 1st March 1951 onwards)	Total Import Duty = Rs. 13-2-9 per cwt. which is equivalent to Rs. 9-10-3 per maund. (This is including Revenue Duty Rs. 6-12-0 per cwt. plus †25% surcharge on it *in addition to* equivalent Excise duty Rs. 3-12-0 per cwt. plus 25% surcharge on it.)	Rs. 3-12-0 per cwt. which is equivalent to Rs. 2-12-1 per maund.

* Excise duty on Khandsari continues to be As. 8 per cwt. from 1949.

† *Vide* Budget for 1951-52, the revenue duty is increased by 5 per cent, the revenue surcharge being increased from 20 per cent to 25 per cent on import duty in 1951-52 effective from 1st March 1951.

TABLE No. 15
Excise Duty and Import Duty on Sugar, Sugar-candy and Molasses

On sugar per cwt.	Import Duty		Total Import duty per cwt.
	Protective duty per cwt.	Additional duty per cwt.	
From 1st April 1932 to 31st March 1934	Rs. 7-4-0	Revenue surcharge of 25 per cent of protective duty at Re. 1-13-0	Rs. 9-1-0
From 1st April 1934 to 27-2-1937 ... (Re. 1-5-0 excise duty on domestic production of factory sugar)	Rs. 7-12-0 (As. 8 being additional margin)	Equivalent excise duty of Re. 1-5-0	Rs. 9-1-0
From 28th February 1937 ... (Rs. 2 excise duty)	Rs. 7-4-0	Equivalent excise duty of Rs. 2	Rs. 9-4-0
From 1st March 1940 ... (Rs. 3 excise duty)	Rs. 6-12-0	Equivalent excise duty of Rs. 3	Rs. 9-12-0
From 1st April 1942 ... (Rs. 3 excise duty)	Rs. 6-12-0	Revenue surcharge of 20 per cent on import duty and equivalent excise duty of Rs. 3/- with 20 per cent surcharge thereon	Rs. 11-11-2
From 1st April 1949 ... (Rs. 3-12-0 excise duty)	Rs. 6-12-0	Revenue surcharge of 20 per cent on import duty and Equivalent Excise Duty of Rs. 3-12-0 with 20% surcharge thereon	Rs. 12-9-7
	REVENUE DUTY		
From 1st April 1950 ... (Rs. 3-12-0 excise duty)	Protective duty converted into Revenue duty of the same amount Rs. 6-12-0 per cwt.	Do.	Rs. 12-9-7 (b)
From 1st March 1951 ... (Excise duty Rs. 3-12-0 per cwt.)	Revenue duty Rs. 6-12-0 per cwt.	Revenue surcharge of 25% on Revenue Duty plus Equivalent Excise duty Rs. 3-12-0 per cwt. with 25% surcharge on it (a)	Rs. 13-2-0‡

(b) After 1st April 1950 the protective duty is Revenue duty of the same amount—Rs. 12-9-9 per cwt. which is equivalent to Rs. 9-4-0 per maund. The excise duty of Rs. 3-12-0 per cwt. works out to Rs. 2-12-1 per maund.

(a) *Vide* the Budget 1951 for 1951-52, the surcharge on Revenue duty was increased from 20 per cent to 25 per cent.

‡ The total import duty of Rs. 13-2-0 per cwt. works out to Rs. 9-10-3 per maund, while the excise duty of Rs. 3-12 per cwt. works out to Rs. 2-12-1 per maund.

TABLE No. 16

Yield of Revenue from Import Duty on Sugar in India from 1931-32 to 1949-50

Year (April-March)	Yield of Revenue Rs.	Year (April-March)	Yield of Revenue Rs.
1931–32	7,97,63,000	1941–42	1,94,000
1932–33	6,84,79,000	1942–43	56,000
1933–34	4,72,04,000	1943–44	4,14,000
1934–35	3,81,35,040	1944–45	1,000
1935–36	3,24,16,000	1945–46	14,000
1936–37	50,52,000	1946–47	2,000
1937–38	25,33,000	1947–48	*Nil*
1938–39	45,22,000	1948–49	23,53,000*
1939–40	3,96,08,000	1949–50 ... (Budget Estimate)	100,000
1940–41	18,24,000	1950 ...	67,911†

* Imported in Oct./Nov. 1947 in Madras, but duty realised in December 1948.

† *Vide* "Sea Borne Trade of India", November 1950. The duty of Rs. 67,911 is on sugar excluding confectionery for only 8 months from April to November 1950. For the same period in 1949 and 1948 the duty was Rs. 3,611 and Rs. 4,682. Import duty on confectionery for the same period in 1948, 1949 and 1950 was Rs. 5,51,514, Rs. 4,22,545, and Rs. 35,074. On sugar candy, the duty during the same period in 1948, 1949 and 1950 was Rs. 64, Rs. 135 and Rs. 8,170. On Cocoa, Chocolate and other confectionery the duty during the same period in 1948, 1949 and 1950 was Rs. 3,09,050, Rs. 1,88,484 and Rs. 1,03,851.

TABLE No. 17

Excise Duty on all Sugar produced in British India and Yield of Revenue therefrom from 1939-40 to 1950-51 Fiscal Year (April-March)

—	Yield of Revenue from Excise duty in Thousand Rupees											
	1939–40	1940–41	1941–42	1942–43	1943–44	1944–45	1945–46	1946–47	1947–48	1948–49	1949–50*	1950–51*
Khandsari ...	1,46	2,86	4,43	1,60	5,09	9,90	6,32	2,39	2,00	2,14	2,19	2,00
Factory Sugar	2,47,60	3,90,11	6,68,27	4,89,24	6,63,63	6,31,17	5,64,04	4,82,11	4,43,47	6,29,05	6,89,78	6,99,00
Collections Under Temporary Sugar (Temporary Excise Duty) Ordinance in 1943–1944 to 1947–48 ..	nil	nil	nil	nil	55,79	1,37,42	15,77	1,56,72	43,29	nil	nil	nil
Total	2,49,06	3,92,97	6,72,70	4,90,84	7,24,51	7,78,49	5,86,13	6,41,22	4,88,76	4,84,00	7,40,00	7,01,00

* *Vide* Letter from Central Board of Revenue No. 37/22 ex of 7-9-1950.

N.B.—Figures uptil 1947-48 are revised *vide* Indian Trade Journal, June 1, 1950.

TABLE No. 18

Average Price of Indian and Imported Sugar in India per maund of 82-2/7 lbs.

	1938	1939	1940	1941	1942	1943	1944	1945	1946 Dec. & 1947	1947 Dec. & 1948	1948 Dec.	1949 Nov.	1950 Nov	1950 Dec.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Indian 1st quality special (Cawnpore market average quotation) (Factory Delivery Basis)	8-0	10-12	10-8	11-0	13-0	14-8	16-0 for D24	16-4 for D24	20-14 for D24	35-7 for D24	28-8 for D24	28-8 for E27	28-8 for E27	29-12 for E27
Imported Sugar (Calcutta market average quotation)	10-8	11-0	11-0	(Practically No import till 1948)										

TABLE No. 19

Approximate Average Price of Gur per maund from 1941-42 to 1950

Gur Market	1941-42 Rs. a.	1942-43 Rs. a.	1943-44 Rs. a.	1944-45 Rs. a.	1945-46 Rs. a.	1946-47 (Dec.) Rs. a.	1948 (May) Rs. a.	1949 Sept. Rs. a.	1950 Sept. Rs. a.
Madras ...	4 2	9 6	9 10	9 4	15 12	12 5	9 12	21 1	...
Ahmednagar ...	6 5	14 14	15 9	12 4	13 12	18 0	11 12	23 3	...
Muzaffarnagar	5 13	8 15	6 12	9 7	12 9	...	13 6	21 7	35 14†
Meerut ...	5 12	9 0	7 6	8 12	10 11	15 9	...	19 14	...
Bhagalpur ...	5 10	11 4	8 5	8 3	12 14	17 2	12 0	14 6	29 14†

† *Vide* Indian Institute of Sugar Technology letter dated 6-11-1950.

TABLE No. 20

Approximate Official Estimate of Total Carry-over of Stocks of Sugar in India at the beginning of November from 1931 to 1949

Year	Tons	Year	Tons
1931 ...	32,000	1941 ...	295,000
1932 ...	19,000	1942 ...	105,000
1933 ...	9,000	1943 ...	133,863
1934 ...	30,000	1944 ...	265,802
1935 ...	23,000	1945 ...	83,072
1936 ...	159,000	1946 ...	112,878
1937 ...	211,000	1947 ...	157,000
1938 ...	102,000	1948 ...	246,170
1939 ...	105,000	1949 ...	47,160*
1940 ...	390,000	1950 ...	N.A.

* Only with factories, excluding markets. *Vide* Letter 8531/Stat of 7-2-1951 from Director, Indian Institute of Sugar Technology, Kanpur.

TABLE No. 21

Estimated Percentage of Gate-cana to the Total Quantity of Cane (i.e. Gate-cane and Rail-borne cane) crushed in Factories in the various Provinces *

Province	1935–36 %	1936–37 %	1937–38 %	1938–39* %	1939–40† %	1940–41 %	1941–42 %	1942–43 %	1943–44 %	1944–45 %	1945–46 %	1946–47 %	1947–48 %	1948–49 %
Bihar ...	50	58	53	53	53	65	63	70	70	75	75	70	70	70
U.P. ...	66	68	72	66	62	69	80	85	85	85	78	70	70	70
W. Bengal ...	26	45	55	54	33	32	52	60	60	60	54	50	59	50
E. Punjab ...	51	61	69	57	47	55	80	80	80	80	78	72	70	70
Bombay ...	100	100	100	100	99	100	100	100	100	100	100	95	90	95
Madras ...	35	67	71	72	75	67	60	65	65	65	71	66	66	66

* Compiled by us from the returns made by factories.

TABLE No. 22

Statement showing Expenditure on Sugar Research by the Indian Council of Agriculture, and the Indian Central Sugarcane Committee * from 1945-46 onwards

Year	Amount Spent Rs.	Remarks for expenditure
1935-36	4,79,086	According to the Chairman of the Central Sugarcane Committee, as per his statement in his speech on Jan. 10, 1951, the Central Sugarcane Committee since its inception in 1944 has spent more than Rs. 40 lakhs on research work.
1936-37	3,88,627	
1937-38	3,46,820	
1938-39	3,24,928	
1939-40	3,56,790	Since 1945-46 the expenditure is shown in separate heads such as Agricultural research, Technological research and Development schemes. Thus in 1949-50 Rs. 6,97,617 were spent on Agricultural schemes, Rs. 89,427 on Technological research, Rs. 6,61,869 on maintenance of Indian Institute of Sugar Technology, Rs. 1,55,883 on administration of Sugarcane Committee, Rs. 10,14,336 on 5-year development scheme. The total expenditure in 1949-50 was Rs. 26,25,140, as against the estimate of Rs. 35,45,039 for 1950-51.
1940-41	3,19,304	
1941-42	3,74,580	
1942-43	3,57,446	
1943-44	4,26,828	
1944-45	0,32,898	
1945-46	11,03,091	
1946-47	11,52,779	
1947-48	10,65,754	
1948-49	31,25,318	
1949-50	26,25,140	
1950-51 (Est.)	35,45,039	

* Figures collected from official sources and furnished by the Secretary, Indian Central Sugarcane Committee, New Delhi (*vide* letter dated 18-8-1950).

TABLE No. 23

Yields of Cane and Sugar per acre and Recoveries in different countries *

Country	Yields of cane per acre		Recovery per cent cane	Yields of Sugar per acre	
	Tons	Mds.		Tons	Mds.
Cuba ...	17.12	465.9	12.25	2.095	57.03
Louisiana ...	19.84	539.8	8.06	1.692	43.58
Puerto Rico ...	24.16	657.7	12.23	2.956	80.44
Hawaii ...	62.05	1,689.0	10.46	6.489†	176.6
Trinidad ...	...	...	10.69	...	—
Mexico ...	19.54	531.8	9.20	1.817	49.44
Martinique ...	17.93	487.8	8.13	1.458	39.68
Haiti ...	...	...	10.92	...	...
Argentine ...	13.05	355.1	9.89	1.290	35.13
Brazil ...	15.68	426.8	4.97	0.741	19.71
Peru ...	41.14	1,119.0	12.33	5.076	138.10
Egypt ...	30.42	827.9	9 97	3.032	82.50
Mauritius ...	19.63	534.3	12.08	2.370	64.51
S. Africa ...	22.36	608.4	10.90	2.439	66.36
Reunion ...	13.20	359.2	10.93	1.390	37.84
Java ...	56.20	1,530.0	11.49	6.440	175.30
INDIA ...	14.70	399.9	9.50	1.394	37.95
Philippines ...	27.08	737.0	8.46	2.287	62.23
Japan and Formosa ...	28.27	769.3	12.93	3.657	99.51
Australia ...	21.34	580.9	14.33	3.060	83.08

* *Vide* Report on Survey of Sugarcane, 1946. Later figures are not available.

† In 1949-50, a new record of average of 14.05 tons of sugar per acre was set by Eva Plantation Co., Hawaii breaking the 1935 record of the average of 13.7 tons of sugar per acre set by Messrs. Waianee Plantation.

TABLE No. 24

Java Sugar Statistics from 1935-36 to 1950-51

(In thousands of long tons)

Crop Year	Initial Stock on 1st April	Production†	Exports	Local Consumption	Final Stock on 31st March
1935-36	1,585	505	863	285	942
1936-37	942	583	975	309	241
1937-38	241	1,392	1,017	306	309
1938-39	309	1,376	1,163	315	206
1939-40	206	1,550	1,214	304	238
1940-41	238	1,579	837	351	628
1941-42	} 705	1,330	} 1,517	...	} 1,500
1942-43		83		...	
1943-44		496		...	
1944-45	1,500	84	nil	...	...
1945-46	...	20	"	...	...
1946-47	...	28	"	600*	980
1947-48	980	54	"	344*	...
1948-49	...	223	"	314*	...
1949-50	...	330	"	...	...
1950-51	...	350	"	...	...

† *Vide* Australian Sugar Journal, January 15, 1951 issue and our 1949 *Annual*.

* Also include figures of exports.

TABLE No. 25

Total Production of Molasses in India * from 1932-33 to 1949-50

Year	Production of molasses in India in 1000 tons†			
	From cane Factory	From Sugar refineries	From Khandsari	Total
1932-33	130	56	275	461
1933-34	190	40	209	430
1934-35	234	22	150	406
1935-36	337	33	125	495
1936-37	406	10	100	516
1937-38	349	8	125	482
1938-39	242	6	100	348
1939-40	485	7	125	627
1940-41	424	32	100	556
1941-42	293	7	100	400
1942-43	369	2	214	585
1943-44	430	4	110	544
1944-45	323	2	92	417
1945-46	328	2	85	415
1946-47	318	2	75	395
1947-48	411	2	84	497
1948-49	369	2	75	446
1949-50	356	2	90	448

* After 1936-37 statistics regarding Burma are excluded and from 1943-44, Pakistan excluded. Production of Molasses from cane factory in Pakistan was 8,600 tons in 1943-44; 4,500 tons in 1944-45; 10,100 in 1945-46 and 8,900 tons in 1946-47. From Khandsari was 18,700 in 1943-44; 12,700 tons in 1944-45; 18,300 tons in 1945-46; and 17,709 tons in 1946-47 (*vide* Indian Trade Journal, June 1950).

† *Vide* Official estimates and Indian Trade Journal, 1950.

TABLE No. 26

Total Value of Sugar Machinery imported in India from 1932-33 to 1949-50

(In Thousands of Rupees)

Source	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	1939-40
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
U.K.	91,48	1,95,87	73,60	49,70	68,49	43,15	30,16	......
Other Countries ...	61,63	1,40,51	31,84	16,00	26,66	26,21	31,20	......
Total ...	1,53,11	3,36,38	1,05,45	65,70	95,16	69,37	61,36	50,84

Source	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949*	1950*
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
U.K. / Other Countries } Total	40,87	20,41	7,73	8,20	11,07	30,43	55,44	95,98	1,51,79	1,42,81	79,21

Total import of these 18 years comes to over Rs. 14 crores.

* The figures refer to imports during 8 months only from April to November. *Vide* "Sea Borne Trade of India", November 1950.

TABLE No. 27

Calculated Net Production * of Gur in India for direct consumption, from 1931-32 to 1949-50

Year (November—October)	Calculated net Annual Production of *Gur* for direct consumption (in Tons)	Year (November—October)	Calculated net Annual Production of *Gur* for direct consumption (in Tons)
1931-32 ..	2,758,000	1941-42 ...	2,829,000
1932-33 ...	3,240,000	1942-43 ...	3,015,000
1933-34 ...	3,486,000	1943-44 ...	3,499,000
1934-35 ...	3,701,000	1944-45 ...	3,633,000
1935-36 ...	4,101,000	1945-46 ...	3,578,000
1936-37 ..	4,268,000	1946-47 ...	3,574,000
1937-38 ...	4,364,000	1947-48 (Union) ...	3,492,000†
1938-39 ..	2,131,000	1948-49 (Union) ...	2,830,000†
1939-40 ..	2,441,000	1949-50 (Union) ..	2,714,000†
1940-41 ...	3,414,000		

* *Vide* letter No. 3174/stat., dated 2nd July 1947, from the Director, Imperial Institute of Sugar Technology, Kanpur, for statistics from 1944-45 to 1946-47 and letter No. 7091/47 Scs., dated 3-11-1949 for statistics for 1947-48 and 1948-49.

† *Vide* letter dated 6-11-1950 from the Director of Indian Institute of Sugar Technology, Kanpur.

TABLE No. 28

Cane Factory Production of Sugar in U.P., Bihar and All-India (in Tons) from 1931-32 to 1949-50

Season	U.P.	Bihar	All-India	Total quantity of *Cane* Crushed by all Factories in tons
1931-32 ...	68,312	75,091	1,58,581	17,83,000
1932-33 ...	1,40,344	1,28,610	2,90,117	33,50,000
1933-34 ...	2,73,774	1,39,957	4,53,965	51,57,000
1934-35 ...	3,15,600	1,84,038	5,78,115	66,72,000
1935-36 ..	5,30,000	2,50,200	9,32,100	98,01,000
1936-37 ...	6,08,600	3,29,300	11,11,400	1,10,87,000
1937-38 ...	5,31,300	2,25,300	9,30,700	99,16,400
1938-39 ...	3,20,300	61,600	6,50,800	70,04,800
1939-40 ...	6,59,500	3,22,100	12,41,700	1,31,31,700
1940-41 ..	5,13,300	2,46,100	10,95,400	1,12,90,000
1941-42 ...	3,82,900	1,17,300	7,78,100	80,26,300
1942-43 ...	6,12,500	2,37,400	10,70,700	1,04,18,500
1943-44 ...	7,27,100	2,12,400	12,16,400	1,21,37,800
1944-45 ...	5,28,900	1,69,900	9,53,500	93,43,300
1945-46 ...	5,25,600	1,78,600	9,44,800	93,59,500
1946-47* ...	5,25,800	1,48,200	9,01,100	91,17,100
1947-48 ...	5,99,900	1,68,500	10,74,800	1,09,10,700
1948-49 ...	5,27,000	1,84,900	10,00,900	1,00,39,300
1949-50† ...	5,08,700§	2,22,600†	9,75,400‡	98,59,900

* *Vide* "Indian Trade Journal" dated 13th October 1949 and June 1, 1950.

Note: After 1946-47 the figures are for Indian Union.

† *Vide* letter I 1-1(Fd)150-7733 Ec. Ad. from the office of the Economic Adviser, Government of India, dated 10-8-1950.

‡ *Vide* letter of the Director, Indian Institute of Sugar Technology, dated 6-11-50.

§ Inclusive of production of Rampur factories (*vide* letter of the Director, Indian Institute of Sugar Technology, dated 19-9-50).

N.B.—In terms of maunds the production in 1949-50 season was 26,516,000, as against 27,264,000 maunds in the previous season (*vide* Director, I.I.S. Technology).

TABLE No. 28-A

Total Production of Sugar by Central Sugar Factories in Provinces and States of the Indian Union (1937-38 to 1949-50)

Year	United Provinces	Bihar	East Punjab	Madras	West Bengal	Bombay	Other States
1937-38 ...	531,300	225,300	7,800	20,700	7,600	40,700	81,200
1938-39 ...	320,300	161,600	4,300	23,000	4,500	52,200	79,200
1939-40 ...	659,500	322,100	8,400	31,300	12,100	69,300	105,100
1940-41 ...	513,300	246,100	9,300	44,100	15,200	84,800	133,300
1941-42 ...	382,900	117,300	7,900	30,800	8,300	85,000	119,200
1942-43 ...	612,500	237,400	5,600	27,500	3,800	77,900	87,100
1943-44 ...	727,100	212,400	11,200	39,200	4,060	81,200	125,500
1944-45 ...	528,200	169,900	8,200	46,500	4,800	74,900	100,000
1945-46 ...	515,900	176 600	6,700	49,200	4,400	72,400	97,700
1946-47 ...	525,800	148,200	8,000	48,700	4,400	65,400	100,600
1947-48 ...	599,900	168 500	12,300	59,300	5,200	89 600	140,000
1948-49 ...	527,000	184,000	9,674	55,000	4,387	111,002	...
1949-50 ...	508,700	222,352	9,249	58,610	3 342	110,000	...

Vide "Indian Trade Journal", June 1950 for figures uptil 1947-48. The figures for 1948-49 are from "Indian Sugar Statistics, 1950".

TABLE No. 29-A

Ex-Factory Price of Sugar as fixed in 1949-50 by Government of India
(Rs. 28-8-0 per maund of sugar)

Authoritative Table showing break-up of the Price of Sugar for E-27 Quality fixed at Rs. 28-8-0 per maund for the year 1949-50 * on the U.P basis

		Rs.	a.	p.
Estimated No. of working days	105 days			
Estimated Recovery	10.0 %			
Cane Price Re. 1-10-0 per maund:				
1. Price of cane per maund of sugar		16	4	0
2. Cess at As. 3 per maund of cane		1	14	0
3. Transport		0	5	3
4. Co-operative Societies Commission		0	6	9
5. Basic Manufacturing Expenses		1	15	0
6. Extra Interest on working capital		0	6	0
7. Additional Manufacturing Charges		3	9	10
8. Excise duty		2	12	1
9. Extra Insurance		0	1	3
10. Award dated 26-6-47		0	3	0
11. Profit		0	14	9
		28	11	11
12. Reduction on account of molasses		0	1	6
13. Deduction on account of high transport charges, high extra interest on working capital, award, etc. as in 1948-49 prices ...		0	6	0
		28	4	5
14. Grade differences		0	4	0
		28	8	5 or
		28	8	0

Sugar price for 1950-51 (Rs. 29-12-0 per maund, E-27 quality)

* The prices of sugar for 1950-51 have been fixed on an *ad hoc* basis for different regions after taking into consideration prevailing conditions in those areas. No authoritative break-up is thus available. However, it is to be noted that the price of cane was increased from Re. 1-10-0 per maund to Rs. 1-12-0 per maund of cane, i.e. to Rs. 17-8-0 for cane per maund of sugar for 1950-51 season and consequently the price of sugar was increased from Rs. 28-8-0 in 1949-50 to Rs. 29-12-0 in 1950-51 season.

Prices for different regions are shown in Table No. 29.

TABLE No. 29

* Minimum Sugarcane Prices and the Ex-Factory Prices of Crystal Sugar of E-27 grade for the 1950-51 season in different States

*Price fixed: Rs. 29-12-0 per maund of sugar, E-27 quality** (1950-51).*
The following is a comprehensive statement showing minimum sugarcane prices and ex-factory prices of crystal sugar of E-27 grade produced on or after 1-11-1950 for 1950-51 season in various States:

Name of State	Price per maund Sugar Ex-factory Rs. a. p.	Authority	Minimum price of cane per maund Rs. a. p.	Authority
Bihar North ...	31 0 0	Ministry of Agriculture Notification S.R.O. 1002 dated 6-12-1950	1 12 0	Ministry of Agriculture S.R.O. 1001 dated 6-12-1950
„ South ...	33 0 0		1 12 0	
Bombay ...	29 12 0		1 12 0	
Punjab ..	30 8 0		1 12 0	
U.P. West ...	30 8 0		1 12 0	
„ East ...	32 0 0		1 12 0	
W. Bengal ...	30 8 0		1 12 0	
Hyderabad ...	29 12 0		1 12 0	
Madhya Bharat ...	31 8 0		1 11 0	
Mysore ...	33 0 0	Ministry of Agri. S.R.O. 50 dated 9-1-1951	1 12 0	
Rajasthan:				
Bhupalsagar ...	33 0 0	Min. of Agr. Notification S.R.O.1002 dated 6-12-1950	1 12 0	
Shriganganagar ...	34 14 0	Min. of Agri. Notification S R.O. 1140 dated 29-12-50	1 13 0	Ministry of Agriculture S.R.O. 1139 of 29-12-50
Pepsu:				
Phagwara ...	34 0 0	Min. of Agri Notification S.R.O. 1039 of 8-12-50	1 13 0	Min. of Agri. S.R. O. 1038 of 8-12-1950
Hamira ..	34 14 0		1 13 0	
Madras:				
Anakapale ...	33 0 0	Ministry of Agriculture Notification No. S.R O. 1102 dated 20-12-1950	1 12 0	Ministry of Agriculture S.R.O. 1071 of 13-12-1950
Etikopaka ...	33 0 0		„	
Mailpatti ...	33 0 0		„	
Podannur ...	33 0 0		„	
Madura ...	33 0 0		„	
Tanuku ...	33 0 0		„	
Bobbili ..	32 0 0		„	
Seethanagaram ..	32 0 0		„	
Pugalur ...	32 0 0		„	
Smalkot ...	32 0 0		„	
Krilampodi ...	32 0 0		„	
Vuyyuru ...	30 8 0		„	
Hospet ...	30 8 0		„	
Nellikuppam ...	30 8 0		„	
Orissa:				
Aska ..	33 0 0		1 12 0	
Rayagada ...	33 0 0		1 12 0	
Bhopal ...	32 0 0	Min. of Agri. Notification S.R.O. 1121 of 19-12-50	1 11 0	
Travancore—Cochin ...	33 0 0	Min. of Agr. S.R. O. of 9-1-51	50 0 0 (per ton)	Min of Agri. S.R. O. 49 of 9-1-51

* *Vide* Letter No. D.O.SV-120(4)/51, Ministry of Agriculture (Sugar and Vanaspati Section), dated 3rd February 1951.

** For differentials in price for various grades, higher and lower than E-27, *vide* another Table in "Sugar Industry at a Glance".

TABLE No. 30

Recovery of Sugar from Cane during 1937-38 to 1949-50 (a)

Provinces	Recovery of Sugar per cent Cane												
	1937-38	1938-39	1939-40	1940-41	1941-42	1942-43	1943-44	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50
U. P. ...	9.18	9.14	9.37	9.87	9.87	10.16	9.92	10.20	10.09	10.03	9.80	9.93	9.64
Bihar ...	9.58	9.00	9.29	9.86	10.35	10.93	10.53	10 69	10.49	10.08	10.49	10.34	9.91
"All other Provinces" ...	9.77	9.91	9.88	9.31	9.22	9.95	9.94	9.92	9.56*	9.16*	9.14*	9.41	10.45
All-India ...	9.38	9.29	9.45	9.70	9.69	10.28	10.02	10.21	10.13*	9.88	9.85	9.97	9.89

(a) *Vide* "Indian Trade Journal", June 1, 1950, and previous issues.
* Includes figures for Rampur factories from 1945-46 (*vide* letter from the Director, Indian Institute of Sugar Technology, dated 19-9-1950).

TABLE No. 31

Production of Sugar directly from Cane in Modern Factories in India from 1929-30 to 1949-50 and Recovery Percentage for Java upto 1938-39

Season	Number of Factories producing Sugar direct from cane	Cane crushed	Sugar produced	Percentage Recovery for India	Percentage Recovery for Java
		Tons	Tons		
1929-30 ...	27	989,776	49,768	9.07	11.76
1930-31 ...	29	1,317,248	119,859	9.00	10.92
1931-32 ...	32	1,783 499	158,581	8,89	11.56
1932-33 ...	57	3,350.231	290,177	8 66	12,84
1933-34 ...	112	5,157,373	453,965	9.80	12.55
1934-35 ...	130	6,572,000	578,115	8.66	13.23
1935-36 ...	137	9,801,748	932,100	9.29	12.77
1936-37 ...	137	11,687,200	1,111,400	9.50	11.87
1937-38 ...	136	9,916,400	930,700	9.38	11.77
1938-39 ...	139	7,001,800	650,800	9.29	12 23
1939-40 ...	145	13,131,700	1,241,700	9.45	(Not Available)
1940-41 ...	148	11,290,900	1,095,400	9.70	
1941-42 ...	150	8,026,300	778,100	9.69	
1942-43 ...	150	10,418,000	1,070,700	10.28	
1943-44 ...	151	12,137,800	1,216,400	10 02	
1944-45 ...	140	9,343,300	953,500	10.21	
1945-46 ...	145	9,359,500	944,800	10.09	
1946-47* ...	135	9,117,100	901,100	9.88	
1947-48* ..	134	10,910,700	1,074,800	9.85	
1948-49* ...	134	10,039,300	1,000,900	9.97	
1949-50* ...	139	9,859,900	975,400	9.89	

* Since 1946-47, figures for Indian Union only.

TABLE No. 32

An interesting Table showing variations in Per Capita Consumption of Gur and Sugar in certain Rural and Urban Areas * in pre-war period (1937-38)

Name of Province	Gur		Sugar	
	Urban areas (lb)	Total for the Province (lb.)	Urban areas (lb.)	Total for the Province (lb.)
United Provinces	13.2 (1)	53.9	58.1 (2)	8.3
Punjab	18.0 (3)	23.3	50.4 (4)	12.8
Bengal	15.4 (5)	22.8	85.5 (5)	6.3
Madras	8.9 (6)	12.1	51.2 (6)	4.4
Bombay	12.4 (7)	14.4	81.4 (7)	16.3
Sind	6.0 (8)	7.2	82.1 (8)	17.7

(1) 22 markets, (2) 29 markets, (3) 6 markets, (4) Delhi, (5) Calcutta, (6) Madras, (7) Bombay, (8) Karachi.

* Report on the Marketing of Sugar published by Central Agricultural Marketing Department (Government of India), 1943, p. 130.

TABLE No. 33

Value of Imports of Sugar,* Revenue from Imports, and Rate of Import Duty on Sugar from 1925-26 to 1949-50

Year April-March	Value of foreign Sugar (Net) imported in British India in Lakhs of Rupees*	Revenue from Import Duty on Sugar in Lakhs of Rupees†	Rate of Import Duty
1925-26 ...	1,520	659	Rs. 4-8-0 per cwt.
1926-27 ...	1,534	744	" "
1927-28 ...	1,450	653	" "
1928-29 ...	1,586	782	" "
1929-30 ...	1,836	846	" "
1930-31 ...	1,047	1,081	Rs. 6-0-0 per cwt.
1931-32 ...	590	797	Rs. 9-1-0 " (Rs. 7-4-0 being protective and Rs. 1-13-0 being revenue surcharge from 1st April 1932)
1932-33 ...	422	685	" "
1933-34 ...	270	472	" "
1934-35 ...	210	381	Rs. 9-1-0 per cwt. (Rs. 7-12-0 being protective & Rs. 1-5-0 being equivalent excise duty from 1st April 1934.)
1935-36 ...	190	324	" "*
1936-37 ...	23	51	" "
1937-38 ...	18	25	Rs. 9-4-0 per cwt. (Rs. 7-4-0 being protective and Rs. 2-0-0 being equivalent excise duty from 28th February 1937.)
1938-39 ...	45	45	" "
1939-40 ...	331	396	Rs. 8-12-0 per cwt. (Rs. 6-12-0 being protective & Rs. 2-0-0 being equivalent excise duty. (With effect from 1st April 1939.)
1940-41 ...	36	18	Rs. 6-12-0 being protective and Rs. 3-0-0 being equivalent excise duty. (With effect from 1st March 1940.)
1941-42 ...	107	19	Rs. 9-12-0 per cwt.
1942-43 ...	...	.5	Rs. 11-11-2 per cwt. with effect from 1st April 1942 (i.e. including 20% surcharge on protective import duty of Rs. 6-12-0) and Rs. 3-0-0 being equivalent excise duty, and 20% surcharge thereon.
1943-44 ...	...	4.1	
1944-45 ...	...	.01	
1945-46 ...	...	.14	
1946-47 ...	...	.02	
1947-48 ...	..	*Nil*	
1948-49† ...	65	23	Rs. 12-9-7 per cwt. with effect from 1st March 1949.
1949-50 ...	...	...	Do.

* Annual statement of sea-borne trade (Burma excluded from 1937-38).

† Imported in Oct./Nov. 1947. Duty realised in December 1948.

TABLE No. 34

Final Forecast of Sugarcane Yield and Acreage for the years 1947-48, 1948-49 and 1949-50 of the Indian Union and Pakistan

Provinces, Unions and States	Area (1000 acres)			Yield (1000 tons) of raw Sugar (gur)		
	1947-48	1948-49	1949-50	1947-48	1948-49	1949-50
Ajmer ...	...	1	1	...	1	1
Tripura ...	...	5	5	...	6	6
PEPSU ...	...	63	55	...	58	61
U.P. ...	2,285	2,116	2,130	2,756	2,454	2,661
Bihar (excluding merged territories) ...	366	388	379	362	256	275
East Punjab ...	379	306	279	396	346	317
Madras ...	273	176	191	753	533	536
Bombay (including merged states) ...	211**	186†	151	695	579*	420
West Bengal ...	63	66‡	57‡	100	106	89
C. P. & Berar (including merged states) ...	59	59	...	76	74	...
Assam ...	60	61	59	74	67	68
Orissa ...	32	62	59	63	120	108
Delhi ...	4	8	4	3	5	2
Kutch ...	1	††	1	2	1	2
Madhya Bharat ...	60	77	55	55†	58†	42
Saurashtra ...	19§	14	10	43	16	16
Hyderabad ...	128	96	57	267	176	106
Mysore ...	50	49	45	83	92	84
Rampur ...	38	36	...	45	...	...
Bhopal ...	9	12	10	8	11	8
Baroda ...	6	5	...	18	...	...
Junagadh ...	4	8	...	4	...	...
Vindhya Pradesh ...	...	8	6	...	...	3
Himachal ...	...	3	3	...	1	1
Rajputana ...	...	35	30	...	31	29
Indian Union ...	4,047	3,791	3,641(a)	5,803	4,904†	4,904†
Pakistan ...	681	714	737(b)	883	1,019	N.A.

(a) According to the Final Sugarcane forecast on 30-9-50, the area under sugarcane was 3,451 thousand acres in 1949-50 and is estimated to be 3,614 thousand acres for 1950-51.

(b) According to the Final Forecast on 14-9-50, the area under sugarcane in Pakistan was 737 thousand acres in 1949-50 and it is estimated to be increased to 747 thousand acres in 1950-51.

* Includes estimates for Poona, other Deccan Districts and Dharwar.

** Includes estimated figures for Banaskantha and Sabarkantha.

† Subject to revision.

‡ Excludes Cooch Bihar.

§ Includes estimated figures for Kunkavav and Mahuva talukas.

†† Below 500 acres.

TABLE No. 35

Yields of Cane in different Provinces in 1943-44 *

Provinces	Area under Sugarcane 1943-44	Yield of Cane 1943-44	Yield of Cane (per Acre)
	(In thousand Acres)	(In thousand Tons)	(Tons)
U.P. (including Rampur)	2,192	27,900	12.7
Punjab	553	5,730	10.4
Bihar and Orissa	456	5,380	11.8
Bengal	339	4,800	14.2
Madras	148	4,180	28.2
Bombay and Sind	169	5,290	31.3
N.-W.F.P.	90	1,000	11.1
Assam	45	500	11.1
C.P. and Berar	29	430	14.8
Delhi	3	20	6.7
Hyderabad	37	800	21.6
Mysore	40	700	17.5
Baroda	4	160	40.0
Bhopal	7	50	7.1
Miscellaneous Areas	156	2,170	...
Total ..	4,268	59,110	13.8

* Panel Report on Sugar, 1946.

Note.—Vide speech of the Dy. Minister for Food and Agriculture on 12-1-1951 at the first Biennial Conference of Sugarcane Research Workers in the Indian Union at Coimbatore, the average yield per acre in 1949-50 was: U.P.: 12.5 tons, Bihar: 12 tons, East Punjab: 12.5 tons, West Bengal: 18 tons, Madras: 25 tons and Bombay: 40 tons.

TABLE No. 36

Estimated Consumption of Factory Sugar in the Indian Union during 1944-45 to 1946-47 † (December-November)

	1st Dec. 1944 to 30th Nov. 1945			1st Dec. 1945 to 30th Nov. 1946			1st Dec. 1946 to 30th Nov. 1947		
	Allotment from Local Consumption	Despatches from U.P. & Bihar	Consumption Estimated	Allotment from Local Consumption	Despatches from U.P. & Bihar	Consumption Estimated	Allotment from Local Consumption	Despatches from U.P. & Bihar	Consumption Estimated
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Assam ...	...	11,700	11,700	...	11,300	11,300	...	13,400	13,400
W. Bengal ...	4,800	49,900	54,700	4,400	34,300	38,700	4,400	30,400	34,880
Bombay & States ..	77,100	133,000	210,100	85,000	80,400	165,400	80,100	98,800	178,900
C.I. & Gwalior	14,700	5,200	19,900	16,300	4,300	20,600	14,400	7,600	22,000
C.P. & States	...	31,900	31,900	...	32,500	32,500	...	32,500	32,500
Delhi ...	...	17,100	17,100	...	16,500	16,500	...	16,400	16,400
Hyderabad ...	16,000	...	16,000	17,000	1,000	18,000	17,500	500	18,000
Jammu & Kashmir ...	600	5,000	5,600	800	4,900	5,700	800	3,800	4,600
Madras & States ...	66,000	37,400	103,400	67,500	30,600	98,100	75,600	27 000	102,600
Orissa ...	2 600	4,700	7,300	2,100	4,900	7,000	2,300	5,100	7,400
E. Punjab & States ...	14,800	37,300	52,100	15,300	46,800	62,100	14,600	27,100	41,700
Rajputana & Ajmer M. ...	3,200	28,200	31,400	3,100	31,100	34,200	3,300	37,900	41,200
Bihar ...	...	56,700	56,700	...	50,900	50,900	...	48,600	48,600
U.P. ...	...	127,900	127,900	...	113,500	113,500	...	113,900	113,900
Indian Union Consumption Total ...	119,800	546,000	745,800	211,500	463,000	674,500	213,000	463,000	676,000

N.B.—Khandsari Sugar is not included in the above consumption figures. Khandsari consumption is estimated at 1 lakh tons.

† *Vide* Supplement to the "Indian Trade Journal", June 1, 1950.

TABLE No. 37

* Calculated Net Production of Gur in the Indian Union by Provinces and States from 1943-44 to 1949-50 (Figures in 1000 tons)

	1943-44	1944-45	1945-46	1946-47	1947-48*	1948-49**	1949-50**
U.P. (Incl. States) ...	1,395	1,357	1,219	1,365	1,561	1,322	1,404
E. Punjab ...	245	312	305	319	300	...	...
Bihar ...	182	142	155	166	124	...	...
W. Bengal ...	64	60	81	78	79	...	...
Madras ...	290	320	283	392	452	...	...
Bombay (Incl. States) ...	337	339	350	360	325	...	...
Assam ...	43	54	42	48	53	...	...
C.P. & Berar ...	37	44	47	44	52	...	...
Orissa ...	57	53	56	46	48	...	...
Delhi ...	2	2	1	2	3	...	...
Mysore ...	39	44	43	42	52	...	...
Hyderabad (Dn.) ...	50	78	79	84	131	...	...
Baroda ...	13	15	13	12	14	...	...
Bhopal ...	1	3	3	3	2	...	...
All-India Total ...	2,755	2,821	2,677	2,959	3,136	2,830	2,714

* Figures till 1947-48 *vide* "Indian Trade Journal", June 1950.

** *Vide* Letter from the Director of the Indian Institute of Sugar Technology, dated 6-11-1950.

TABLE No. 38

Wholesale Prices of Wheat, Rice, Sugar, Gur and Sugarcane in Bihar and the United Provinces from 1939 to 1950 along with Index Numbers of Prices

—	Wheat, Dara (Hapur) per md.	Rice (Coarse) (Patna) per md.	Sugar Marhowrah (Cawnpore) per md.	Gur Eating (Muzaffarnagar) per md.	Sugar Cane (U.P. & Bihar) per md.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Aug. 1939 (Base) Index price	100	100	100	100	100
Aug. 1939	2 9 9	3 0 0	9 13 0	8 4 0	0 7 0
Sep. 1939	2 15 3	3 4 0	10 14 0	8 8 0	0 7 0
Sep. 1940	3 3 6	4 5 0	9 4 0	4 8 0	0 5 6
Sep. 1941	4 0 9	5 6 0	9 12 0	3 10 0	0 5 0
Sep. 1942	5 0 0	7 4 0	12 4 0	10 0 0	0 8 0
Sep. 1943	13 10 0	20 0 0	14 9 0	11 0 0	0 10 0
Sep. 1944	9 12 0	11 12 0	15 6 0	7 11 0	0 12 0
Sep. 1945	10 4 0	10 0 0	16 12 0	11 2 0	0 14 6
Nov. 1946	10 4 0	10 9 0	21 6 6	13 13 6	1 3 10½
Sep. 1947	10 4 0	12 5 0	21 6 6	......	1 3 10½
Jan. 1948	19 0 0	22 0 0	36 12 0	9 4 0	1 15 9
March 1948	21 0 0	17 0 0	36 4 0	11 2 0	1 15 9
March 1949	23 0 0	22 0 0	31 14 0	14 4 0	1 10 0†
Sep. 1949	15 3 2	22 0 0	29 12 0	22 0 0	1 13 0†
March 1950	15 3 2	22 0 0	28 11 0	23 0 0	1 10 0(a)
May 1950	15 5 9	26 0 0	28 11 0	35 0 0	1 10 9(b)

† Re. 1-10-0 in U.P., and Re. 1-13-0 in Bihar, during the 1948-49 season.
(a) & (b): Re. 1-10-0 in U.P. and Re. 1-10-9 in Bihar for 1949-50 season. (*Vide* letter Economic Adviser, Govt. of India, dated 10-8-1950.)

(*For Table No. 39 see next page*)

TABLE No. 40

*** Export of Sugar from India (Molasses are included)**

Particulars	1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51
INDIAN SUGAR							
Quantity (Tons)	6,647	7,075	1,823	5,243	26,268	7,184*	719**
Value (Rs.) ...	31,71,932	28,96,547	9,98,547	38,68,122	...	...	...
FOREIGN SUGAR							
Quantity (Tons)	...	313	280	...	...	...	...
Value (Rs.) ...	...	2,12,373	2,12,770	...	...	...	...

* Unlike other figures this figure does not include export of gur and molasses, etc. The figure refers to export of sugar only by land and sea, during the period of 12 months from April to March 1949-50. The total export of sugar including molasses during the period of 8 months from January 1949 to August 1949 was 18,010 tons, out of which sugar was 6,376 tons only.

** The figure refers to export of sugar excluding molasses during the period of 5 months from April to August end 1950. (*Vide* "Monthly Survey of Business Conditions in India", Oct. 1950.)

Note.—Exports of sugar from July 1, 1950 were limited to 5,000 tons till June 1951 for the Far East, Ceylon, etc. and to the 1948 level for French India from July 1950 to June ending 1951.

TABLE No. 39

* Statement showing the Technical Efficiency of Sugar Factories in India as compared to that in other Countries

—	India			Natal			Hawaii			Queensland			Java	Cuba	Formosa	Mauritius			British Guiana	
	1934	1940-41	1947-48	1941	1947	1948	1941	1946	1947	1940	1946	1947	1932	1931	1938	1941	1946	1947	1946	1947
Cane-sucrose per cent ...	11.21	12.18	12.48	14.00	13.32	13.89	11.05	12.59	12.22	16.04	14.91	15.30	13.22	13.87	13.09	13.30	13.56	14.34	11.45	11.24
Cane-fibre per cent ...	15.50	16.18	16.29	15.66	15.80	15.90	13.44	14.76	15.09	11.58	11.83	12.72	12.60	10.92	11.68	12.60	12.58	12.50	14.38	14.44
Mixed Juice purity ...	79.21	80.45	...	85.67	86.24	85.92	82.38	83.67	82.89	...	...	82.29	84.30	85.57	83.89	85.30	85.20	87.00	80.69	79.40
Extraction ...	90.65	91.22	91.51	92.37	93.94	93.32	96.32	06.38	95.94	95.46	95.31	95.86	94.60	94.62	97.62	95.20	94.90	94.90	91.62	91.45
Extraction reduced ...	92.72	93.43	93.56	94.13	95.01	94.95	96.61	97.01	96.74	95.05	94.93	95.90	94.66	93.73	97.43	95.10	94.90	94.90	92.87	92.76
Overall recovery ...	77.05	79.58	80.40	81 66	83 73	83.19	87.65	85.49	85.33	87.34	82.57	84.34	85.83	87.74	90.43	85.10	83.70	85.50	79.35	77.68
Overall recovery reduced (Technical efficiency) ...	83.35	85.04	84.96	82.61	84.09	83.85	89.44	87.09	87.59	...	...	...	86.36	86.62	90.83	84.02	83.51	83.42	83.71	83.26
Yield per cent as sugar ...	8.70	9.72	...	11.60	8.84	8.55	10.74	9.06	9.35	14.22	8.02	7.65	11.16	12.33	12.05	11.48	8.06	8.03	10.61	11.04
Yield per cent as sugar-96 polarisation ...	9.00	10.1	9.57	11.92	8.60	8.31	10.90	8.92	9 21	14.60	7.80	7.44	...	12.84	12.20	11.80	8.46	7.83	10.59	10.99

* *Vide* M. P. Gandhi's Annual 1949 and estimates by H. H. Dodds and J. L. Du Toit for 1949.

TABLE No. 41

* Technical Efficiency of Sugar Factories in Different Countries in 1946, 1947 and 1948

—	Mauritius		British Guiana		Hawaii		Queensland		Trinidad		Puerto Rico	India	Natal	
	1946	1947	1946	1947	1946	1947	1946	1947	1946	1947	1947	1947–48	1947	1948
CANE :—														
Per cent Sucrose ...	13.56	14.37	11.45	11.24	12.59	18.22	14.91	15.30	12.44	12.11	13.09	12.48	13.32	13.89
Per cent fibre ...	12.58	12.50	14.38	14.44	14 76	15.09	11.83	12.72	14.80	15.20	13.89	16.29	15.80	15.90
JUICES :—														
Purity of first Crusher ...	88.00	89.70	82.58	81.42	86.50	85.66	84.71	88 81	84.37	83.07	84.08	81.11	88.49	88.12
Purity of mixed juice ...	85.20	87.00	80.69	79.40	83.67	82.89	...	...	82.29	81.01	...	...	86.24	85.92
BAGASSE :—														
Per cent Sucrose ...	2.82	2.96	3.29	3.29	2.03	2.15	2.78	2.43	2.49	2.32	2 65	...	2.54	2.67
Per cent Moisture ...	44.80	44.90	46.34	46.20	42.80	43.66	50.15	48.49	48.15	48.12	48.66	...	50.46	50.53
EXTRACTION :—														
Sucrose in mixed juice per cent sucrose in cane ...	94.90	94.90	91.62	91.44	96.38	95.94	95.31	95.86	93.87	93.47	94.07	91.51	93.94	93.82
Reduced Extraction based on 12.5 per cent fibre ...	94.90	94.90	92.87	92 76	97.01	96.74	94.93	95.90	94.96	94.80	94.75	93.66	95.01	94.95
FINAL MOLASSES :—														
Purity ...	39.20	39.10	32.77	33.10	39.83	39.14	46.42	47.67	31.59	31.38	30.99	33.68	41.10	41.53
RECOVERY :—														
Sucrose per cent cane lost in manufacture	2.21	2.11	2.36	2.51	1.83	1.79	2.60	2.39	1.78	1.98	1.94	2.45	2.16	2.33
Sucrose in sugar per cent sucrose in cane	83.70	85 30	79.35	77.68	85.49	85.33	82.57	84.37	85.67	83.68	85·19	80.40	83.73	83.19
Reduced Overall recovery (12.5 per cent fibre, 85 purity) Technical Efficiency ...	83.51	83.42	83.71	83.26	87.09	87.59	...	...	88.15	87·33	...	84.96	84.09	83.85
Sucrose in sugar per cent sucrose in mixed juice ...	88.20	89.80	86.63	84.95	88.69	88.94	88.67	88.00	91.36	89 53	90.56	87.85	89.61	89.14
Reduced boiling house recovery (based on 85 purity mixed juice) ...	88.00	87.90	90.14	89.76	89.77	90.54	...	...	92.83	92.12	...	90.71	88.51	88.31

—	Mauritius		British Guiana		Hawaii		Queensland		Trinidad		Puerto Rico	India	Natal	
	1946	1947	1946	1947	1946	1947	1946	1947	1946	1947	1947	1947–48	1947	1948
YIELD :—														
Tons cane per ton sugar ...	8.67	8.03	10.61	11.04	9.06	9.35	8.02	7.65	9.09	9.36	8.70	...	9.84	8.55
Tons cane per ton sugar of 96 polarization	8.46	7.83	10.56	10.99	8.92	9.21	7.80	7.44	9.01	9.47	8 61	9.57	8.60	8.31
LOSSES :—														
Sucrose in bagasse per cent sucrose in cane (A) ...	5.10	5.10	8.36	8.55	3.62	4.06	4.69	4.14	6.13	6.53	5.93	8.49	6.56	6.68
Sucrose in filter cane per cent sucrose in cane (B) ...	0.96	0.95	0.97	0.89	0.70	0.76	0.68	0.53	0.42	0.43	0.72	0.83	0.32	0.36
Sucrose in Molasses per cent sucrose in cane (C) ...	...	...	8.39	9.22	9.44	9.71	8.93	6.80	...	...	7.46	9.31	...	...
Undermined sucrose per cent sucrose in cane (D) ...	10.24	8.65	2.91	3.66	0.75	0.14	3.13	4.16	7 78	9.36	0.70	0.97	9.39	9.77
Sucrose lost in Boiling house, sucrose in cane (B)+(C)+(D) ...	11.24	9.60	12.27	13.77	10.89	10.61	12.74	11.49	8.20	9.79	8.88	11.11	9.71	10.13
Sucrose in total losses per cent sucrose in cane (A)+(B)+(C)+(D) ...	16.30	14.70	20.65	22.32	14.51	14 67	17.43	15 63	14.33	16.32	14.81	19.60	16.27	16.81
SUGAR :—														
Average polarization of all sugars ...	98.40	98.50	96 44	96.41	97.53	97.51	98.72	98.75	96.81	96.88	97.02	...	98.83	98.83

* *Vide* estimates compiled by H. H. Dodds and J. J. Du Toit for South African Sugar Technologists' Association, 1949 and published in October 1949 issue of "Indian Sugar".

Note.—While comparing the efficiency figures account has to be taken of the fact that India is producing sugar of very high polarization as compared with other countries and thus losses in Indian factories can be comparatively higher. Low polarization is indicative of the fact that the figures of efficiency in respect of other countries relate to raw sugar, while in case of India these relate to refined sugar. Java figures are not available.

TABLE No. 42

World Sugar Industry—A Comparative Study showing Yield per acre, Recovery per cent, Technical Efficiency, Production, Consumption, etc.

Country	Yield Per acre*				Recovery *Per cent	Technical Efficiency (1947)	Production (lakh Tons) (1948–49)	Consumption			Retail Price per lb. in annas (March 1949)
	Cane		Sugar					*Per Capita* lbs. (1949)	1947–48 (lakh tons)	1948–49 (lakh tons)	
	Tons	Maunds	Tons	Maunds							
Mexico‡	19.5	631.8	1.82	49.44	9.20	...	7.0	...	5.58	5.78	...
Cuba	17.1	565.9	2.1	57.0	12.25	...	54.2	82.1	2.08	2.1	4.23
Louisiana†	19.8	539 8	1.6	43 6	8.06	...	...	...	...	...	...
Puerto Rico	24.2	657.7	2.95	80.44	12.23	...	11.4	...	0.86	0.91	...
Hawaii	62.1	168.9	6.5	176.6	10.46	87.59	8.5	145.7	0.30	0.32	4.97
Martinique	17.9	487.8	1.5	39.7	8.13	83.42	...	...	...	...	...
Argentina	13.1	355.1	1.29	35 5	9.89	...	5.6	71.9	6.11	6.15	2.51
Brazil	...	...	...	...	...	...	15.5	51.7	14.82	15.5	4.59
Peru	41.1	1119	5.1	138.1	12.33	...	4 7	30.6	1 72	1.80	1.77
Egypt	30.4	827.9	3.03	82 5	9.97	...	...	20.4	1.93	2.0	5.45
Mauritius	19 6	536.3	2.37	64.51	12.08	83.42	3.9	...	0.18	0.20	...
S. Africa	22.4	608.4	2.44	66.4	10.90	...	5.4	58.6	5.55	5.75	3.63
Java	56.2	1530	6.44	175.3	11.49	...	2.7	..	3 5	3.2	...
India	14.7	399.9	1.39	37.95	9.5	84.96††	10.0	24.3	13.0	13.5	6.5
Japan &	...	...	...	...	...	...	...	29.1	5.5	3.5	11.55
Formosa	28.3	769.3	3.66	99.51	12.93	...	6.4‡‡	...	6 53	8.95	...
Australia§	21.3	581.0	3.1	83.1	14.33	...	9.4	114.5	4.84	5.1	3.17
Philippines	27.1	737.0	2.3	62.2	8.45	...	6.5	13.2	1.5	1.75	5.37

* *Vide* Report on Survey of Sugarcane, 1946.

† In 1946-47, 1947-48 and 1948-49 the yield of cane per acre was 17.6, 15.2 and 19.5 and sugar per acre was 1.5, 1.1 and 1.6 tons.

‡ Mexico was an importer of sugar in 1946 of more than £3.75 million but it in 1948-49 became an exporter of sugar worth £3 million.

§ Cane yield per acre in 1945, 1946 & 1947 was 19.0, 16.3 and 18.8 tons while that of sugar per acre during the same period was 2.7, 2.2, and 2.6 tons (*vide* Indian Sugar Manual, 1949).

†† While that for Natal was 84.09, Trinidad 87.33 and Br. Guinea 83.26 in 1947.

‡‡ This figure refers to Formosa only excluding Japan.

TABLE No. 43

MINIMUM PRICES OF CANE SINCE 1943-44

Non-varying price for cane in U.P. and Bihar in 1943-44

Early in November 1943, the Government announced an increase in the minimum price of cane in U.P. and Bihar from As. 10 a maund which was the price in the 1942-43 season, to As. 12 a maund of cane. At the same time, the factories were directed not to pay the full price to the cane-grower all at once. One-sixth of the price, i.e. two annas a maund, was to be paid in Defence Savings Bonds or Certificates which were to be cashed one year after the war was over. The Government expected that on the basis of production of 9 lakhs tons of sugar in U.P. and Bihar, nearly Rs. 3 crores would thus be withheld from circulation

and be of assistance in their anti-inflationary tendencies. The Punjab Government, finding that factories were unable to get cane at Re. 0-12-0, fixed Re. 0-14-6 per maund, and the Bengal Government fixed Re. 1 per maund.

Special Reduction in Cane Price towards the fag end of the Season, 1943-44

With effect from 15th May 1944, the U.P. Government announced a reduction of Re. 0-2-0 in the price of cane, i.e. to Re. 0-10-0 per maund, in order to induce factories to continue crushing and produce maximum quantities of sugar. The full amount was to be paid straight to cane-growers.

Discontinuance of Additional Special Cess of Re. 0-0-6 per maund of Cane in U.P. and Bihar in 1943-44

Additional Cess of Re. 0-0-6 per maund of cane imposed in 1940-41 to repay the deferred excise duty, for which an amount of Rs. 150 crores was borrowed from the Government of India, with a view to enable the Governments of U.P. and Bihar to give a temporary rebate of one rupee per maund of the excise duty, was discontinued from 1943-44 season, as the amount was fully collected and as the sum, along with the interest, was repaid to Government of India.

Raising of Ordinary Cess on Cane from Re. 0-0-3 to Re. 0-1-0 per maund in U.P. and Bihar in 1943-44

The rate of ordinary Provincial cess on cane which was Re. 0-0-3 per maund was, however, raised to Re. 0-1-0 per maund with effect from 1943-44, in U.P. and Bihar, in spite of protests of the industry. The proceeds of this cess were credited to Provincial Revenues as usual. No portion of this cess was earmarked for any specific purpose.

Cane Prices and Cane-Cess During 1944-45 and 1945-46 Seasons in U.P. and Bihar

In October 1944, the Sugar Controller for India, after consulting his Advisory Committee, announced an increase of Re. 1-7-0 in the Sugar price, thereby fixing the price of sugar of the standard quality (D.24) at Rs. 16-4-0 per maund. The Government of U.P. and Bihar on the basis of this increase fixed a cane price of As. 14. Thus the minimum price of cane for the season 1944-45 was fixed at annas 14 per maund of cane exclusive of cess to be paid by all factories.

In September 1945, the Governments of U.P. and Bihar announced the minimum prices for sugarcane in the 1945-46 season as follows:—

For U.P. Re. 0-14-6 per maund for cane delivered at the factory gate, and

Re. 0-14-0 per maund for cane purchased at outstations.

For Bihar Re. 0-15-0 per maund.

Cane Prices in the Punjab and Bengal (1945-46)

To enable factories in the Punjab and Bengal to get cane without any difficulty, the cane prices were fixed higher than in the U.P. and Bihar. The price fixed in the Punjab was Re. 1 per maund, while in Bengal it was as high as Re. 1-2-0 per maund.

Cane Cess in Bihar and U.P. (1944-45 and 1945-46)

A cess of Re. 0-1-0 per maund was levied on all sugarcane utilised in factories in Bihar. The sugar factories at Maharajganj, Baksar and the Gangadeshi Sugar Factory were exempted from payment of this cess in 1945-46.

In U.P. also, a cess at the rate of Re. 0-1-0 per maund was levied in 1946-47 as in 1944-45.

No compulsory deductions from cane prices for Defence Savings Certificates were made in the U.P. and Bihar during this season, the same having been abolished late in the 1944-45 season, i.e. in January 1945.

Cane Prices in other Areas in 1944-45 and 1945-46

Madras

In order to ensure adequate supplies of sugarcane to the sugar factories in the Province, the Madras Government prohibited crushing of sugarcane for the manufacture of jaggery except under permits in most of the factory areas and directed the cane-growers in specified villages in these areas to supply cane to the factories concerned. Basic minimum prices of sugarcane for delivery at the factory were fixed for all the factory areas in the Province taking into consideration the price of sugar, the percentage of recovery of sugar, the cost of cultivation and profits on alternative crops. The prices were fixed in such a way as to ensure that full benefit of the increase in sugar price since 1944 was passed on to the cane-growers by way of enhanced prices for cane. The prices so fixed ranged from Rs. 20-8 to Rs. 24 per ton in 1944-45 and from Rs. 21 to Rs. 26 per ton in 1945-46.

Mysore

The price fixed for sugarcane to be purchased from the ryots was Rs. 21 per ton in 1944-45 as against Rs. 18 in 1943-44.

Income from Cane Cess in 1945-46 and 1946-47

Usually the income accruing to the Provincial Governments of U.P. and Bihar from cane cess are merged in Provincial revenues and no portion thereof is earmarked for any specific purpose. The income from the cess during 1946-47 is estimated at Rs. 90 lakhs in U.P. and Rs. 25 lakhs in Bihar.

Cane Cess in U.P. and Bihar in 1946-47

The Governments of Bihar and U.P. continued to levy a cess at the rate of one anna per maund of sugarcane which entered the areas comprised in the sugar factories in both the provinces.

On the 8th January 1947, the Government of Bihar, by an amendment of the Bihar Sugar Factories Control Act, 1937 (Bihar Act VII of 1937), imposed an additional cess of half anna per maund of sugarcane for the 1946-47 season. By a notification issued on the 3rd September 1947, the Government of Bihar remitted the cess at the rate of Re. 0-0-6 per maund, out of the total cess of Re. 0-1-6 per maund imposed under notification No. 58-D, dated the 8th January 1947, on all cane crushed during the crushing season 1946-47 in the Bihar factories. Thus, the net cess levied on factories in Bihar was one anna per maund, as in the U.P., for the 1946-47 season.

The Government of Bihar explained in a Press Note at the commencement of the crushing season 1946-47, that the price of sugar had been fixed by the Government of India at Rs. 20-14-0 per maund on the basis of a season of 90 days and sugar recovery of 10.5 per cent for Bihar, and 100 days and 10 per cent respectively for U.P. The price of sugar thus fixed was favourable to the Bihar factories, as the cost worked out at Re. 0-5-9 per maund more in the case of U.P. factories as compared with the Bihar factories. It was accordingly decided to tap this uncovered income and an additional cess of half anna per maund of sugarcane was imposed. Due to various reasons, the 1946-47 cane-crushing season lasted for a much shorter period than what was estimated and the sugar recovery was also much less, with the result that factories had to suffer loss instead of making profit. The Government of Bihar, therefore, decided in September 1947 to remit this additional cess of half anna per maund of sugarcane levied during the 1946-47 season. The amount was refunded to the factories in Bihar.

Cane Prices in Mysore, Madras and Bengal in 1946-47

Consequent on the increase in the sugar prices with effect from the 23rd October 1946, the Government of Mysore raised the price of sugarcane from Rs. 24 per ton to Rs. 32 per ton, for the season 1946-47. In Madras the minimum price for sugarcane varied from Rs. 29 per ton to Rs. 34 per ton at the various factories in 1946-47.

In Bengal the price of cane was fixed at Re. 1-6-0 per maund.

Cane Prices in U.P. and Bihar in 1946-47

The Government of India increased the prices of all grades of sugar by Rs. 4-4-0 per maund with effect from the 23rd October 1946, raising the price of D-24 sugar to Rs. 20-14-0 per maund. For the Punjab and N.-W.F. Province the price was fixed higher by about Rs. 3-2-0 per maund, i.e. at Rs. 24 per maund. The minimum price

of cane fixed by the Provincial Governments of U.P. and Bihar for their provinces for the 1946-47 season was Re. 1-4-0 per standard maund of 82 2/7 lbs. avoirdupois exclusive of cess at the rate of one anna per maund.

Cane Prices and Cess in U.P. and Bihar in 1947-48

On the 8th December 1947, the Government of India removed the control on sugar and *gur*. Since this date, there has been no fixation of prices of sugar by the Government of India, although the fixation of the price at Rs. 35-7-0 per maund by the industry was done with the approval of the Governments of U.P. and Bihar and the Government of India. With effect from the commencement of the cane crushing season in 1947-48, the cane price in U.P. and Bihar was fixed at a flat rate of Rs. 2 per maund in place of Re. 1-4-0 per maund in the previous season.

It will be interesting to note that minimum prices of sugarcane were not statutorily fixed in U.P. and Bihar in the 1947-48 season. These prices were merely agreed upon by the industry and Government, and the agreement was kept. No Gazette notification was accordingly made in this connection in 1947-48.

Cane Prices in Madras, Mysore and West Bengal for 1947-48

Consequent on the increase in sugar price with effect from the 8th December 1947, the prices of sugarcane in Madras, Mysore and Bengal were also raised. The Madras Government fixed the cane price at Rs. 54 per ton (in place of Rs. 34 per ton in 1946-47) and this price was linked with the percentage of recovery of sugar and the net amount realised by factories for the sale of sugar produced during the season. For the 1947-48 crushing season, that is, November 1947, to end of June 1948, a sliding scale of price for cane was fixed on the following basis : —

(i) If the average net amount realised by the individual factories from the sale of sugar produced during the season and sold upto 31st October 1948, is not less than Rs. 935 per ton, the factories will pay an average price not lower than Rs. 54 per ton for not less than 9% recovery; where the recovery falls below 9%, an amount of Re. 0-10-0 per ton of cane shall be deducted for every 0.1% of fall in the outturn.

(ii) In the event of the average net amount realised by individual, factories from the sale of sugar being below Rs. 935 per ton, the standard formula shall apply.

(iii) The price will be subject to a maximum total payment of Rs. 54 per ton of cane, in the case of factories whose average daily rate of crushing for the season has been less than 400 tons per day.

The initial delivery price will not be less than Rs. 38 per ton and the balance to be paid not later than 30th November after calculating the net average price per ton realised by the factories upto 31st October.

The formula accepted by the Government for the fixation of cane prices in future years was as follows :—

The price payable by factories for cane is to be caluculated on the net amount realised by individual factories from the sale of sugar and on the actual recovery obtained by individual factories as follows :—

Sugar Price.	*Average Cane Price.*		
Above Rs. 840	60% of the net amount realised by individual factories from the sale of sugar divided by the actual number of tons of cane used in the production of one ton of sugar.		
Above Rs. 740 upto Rs. 840	59%	do.	do.
Above Rs. 640 upto Rs. 740	57%	do.	do.
Above Rs. 540 upto Rs. 640	55%	do.	do.
Upto and including Rs. 540	52-58%	do.	do.

The net amount realised by individual factories for the sale of sugar in this context meant the net average price realised at the factory for 1 ton of white sugar after deduction of excise duty, new or increased direct taxes, and sugar selling commission where actually paid upto a minimum of 1%.

The factory at Hospet also reported that the price for unregistered cane was fixed on a slightly different basis than for registered cane as shown above. The factory paid Rs. 32 per ton immediately, and the cultivator was to apply in due course for the balance due under a scale fixed on the percentage basis of the above formula.

Mysore Cane Prices and Cess in 1947-48

In Mysore the minimum price of sugarcane was fixed at Rs. 44-8-0 per ton for the 1947-48 season, as against Rs. 32 per ton for the 1946-47 season. A cess was levied for the first time at the rate of Rs. 6 per ton of cane.

West Bengal Cane Prices in 1947-48

The price of cane in West Bengal and East Bengal was fixed at Rs. 2 per maund as in U.P. and Bihar. (Re. 1-14-0 at outstations, and Rs. 2 at the gate.)

Sugarcane Cess in Bombay in 1947-48

A cane cess was for the first time imposed in Bombay, in October 1948, at the rate of Re. 0-3-0 per Bengal maund, and was made applicable, retrospectively, on cane consumed in factories, with effect from

1st January 1948. The proceeds, it was stated, would be spent on development of cane, etc.

Minimum Cane Price, and Cane Cess, in U.P. and Bihar in 1948-49

The minimum cane price fixed by the U.P. Government in 1948-49 in the U.P. was Re. 1-10-0 per maund, out of which Re. 1-8-0 was to be paid in cash, and Re. 0-2-0 was deducted by the factory under instructions from the Government and invested for saving in the name of the cane-growers concerned. Withdrawals from this fund were not allowed during the first twelve months. Interest was allowed at 1½% for the first year, 2% for the second year and 2½% for the third year.

The minimum cane price fixed by the Bihar Government in 1948-49 in Bihar was Re. 1-13-0 per maund.

In April 1949, deductions were allowed in price of cane to two factories in South Bihar at the rate of Re. 0-4-0 and Re. 0-5-0 per maund, till the end of the season.

Cane Cess in U.P. and Bihar in 1948-49

The cane cess throughout the 1948-49 season was levied at Re. 0-3-0 per maund in the U.P. and Re. 0-2-0 per maund in Bihar. This was not reduced or remitted in either of the Provinces.

In March 1949, the Governments of U.P. and Bihar were pleased "to postpone recovery of the cess on cane after the 15th February 1949, in the case of some factories with a view to enable them to tide over the difficulties temporarily created by accumulation of stocks of sugar owing to inadequate transport facilities", and in return the factories were "to give a clear undertaking that they will accept cane in excess of the bonded quantity offered by the cane-growers until the end of April 1949".

Comparative Prices of Sugar and Sugarcane

The following table will show the prices of sugar and sugarcane from 1942-43 upto 1948-49 :—

	Controlled price of sugar (D. 24 quality) per maund.	Minimum price of cane in U.P. and Bihar per maund.
	Rs. a. p.	Rs. a. p. Rs. a. p.
1942-43 ...	14 0 0	0 10 0 + 0 1 0 cess
1946-47 ...	20 14 0	1 4 0 + 0 1 0 cess
1947-48 ...	35 7 0	2 0 0 + 0 3 0 cess
1948-49 ...	28 8 0	1 10 0 + 0 3 0 cess in U.P. 1 13 0 + 0 3 0 cess in Bihar

It will be of interest to note that the cane price constituted 60% of the price of sugar in 1947-48, less the amount of excise duty of

Rs. 2-3-3 per maund. In 1946-47 the cane price constituted 70% on the above basis, and in 1943, the cane price constituted 57%. In 1948-49, the cane price constituted 64%.

A glance at the table will show that the cane price has been increased 320%, and sugar price by 250% during the 5 years ended 1947-48.

The cess on cane was levied at Re. 0-3-0 per maund in 1947-48, in both U.P. and Bihar, and at Re. 0-3-0 and Re. 0-2-0 respectively in 1948-49.

Income from Cane Cess in U.P. and Bihar in 1945-46, 1946-47 1947-48, 1948-49, and 1949-50

A cess on cane has been levied by the Provincial Governments of U.P. and Bihar since 1938-39, of varying amounts. The following table gives the amount of cane cess levied from 1944-45 onwards along with the income and the expenditure therefrom :—

United Provinces

Year.	Amount of cess per maund of cane	Total Income from cess	Expenditure incurred on cane Development schemes
		Rs.	Rs.
1944–45	1 anna	1,11,92,000	2,57,200
1945–46	1 „	93,62,542	1,93,350
1946–47	1 „	87,04,000	1.17,000
1947–48	3 annas	1,85,33,432	...
1948–49	3 „	2,98,78,688	37,82,300
1949–50	3 „	*2,05,38,241 (approx.)	41,43,500

Bihar

Year.	Amount of cess per maund of cane	Total Income from cess	Expenditure incurred on cane Development schemes
1944–45	1 anna	7,49,402	...
1945–46	1 „	18,05,421	8,07,307
1946–47	1 „	35,10,433	9,61,939
1947–48	3 annas	24,57,000	11,43,903
1948–49	2 „	63,19,071	14,37,836
1949–50	3 „	113,45,065	...

The proceeds from the cess were, as usual, *merged in Provincial revenues and no portion thereof was earmarked for any specific purpose.* The Provincial Government, however, spent a substantial amount from general revenues during the aforesaid years on (i) the Cane Development Department, (ii) the staff for the reservation and bounding of sugarcane, (iii) the staff maintained for the administration of the United Provinces Sugar Factories Control Act, 1938, and the Rules made thereunder, and the Sugar and Sugar Products Control Order, promulgated by the Government of India, (iv) the Sugar Commission, (v) the

Vide the Cane Commissioner, U.P., letter April 1951.

special staff maintained at the Indian Institute of Sugar Technology in connection with the technical and statistical work entailed by the Sugar Factories Control Act and Rules, and (vi) the improvement of road communication in areas of cane supplies.

In Bihar the proceeds from the cane cess were merged in the General Revenues and no portion was set apart for any specific purpose. In 1948, however, it was announced by Government that except in times of financial stress, the proceeds of the cess on cane will be mainly available for schemes of sugarcane cultivation and research.

Sugarcane Cess in Bombay in 1949-50

A cane cess at the rate of 3 annas per maund was levied in Bombay Province, as in the previous season.

The receipts from the sugarcane cess for the period commencing from 1st January 1948 to 31st March 1949, were actually recovered during the year 1949-50. The figures for the relative periods during the years 1947-48 and 1948-49 are not separately available. The figure for the period ending 30th September 1949, including as stated above, the arrears from 1st January 1948, was Rs. 41,80,609.

The proceeds of the cess and the fees recovered under the Act (Bombay Act No. LXXII of 1948) "for levying a cess and establishing a fund for the purpose of development and improvement of cultivation, growth and marketing of sugarcane and other irrigated crops, for the development of the sugar industry, and for improvement and development of agriculture in general" are kept under a separate fund known as the "Provincial Sugarcane Cess Fund", and utilised in the manner indicated in Section 11 of the Bombay Sugarcane Cess Act, 1948. As regards expenditure incurred from the cess fund, it was reported that provision for financing a scheme for extensive research on sugarcane in the Bombay Province, costing Rs. 4,82,000, during 1949, was made in the budget for 1949-50.

Cane Prices in Madras in 1948-49

The Madras Government fixed the cane price in November 1948 at Rs. 60 per ton. As this notification was issued regardless of the reduction contemplated in the price of sugar by the Government of India, and as it was impossible for the factories to pay such a high price, negotiations took place between the South Indian Sugar Mills Association and the Madras Government. As a consequence thereof, the Madras Government agreed to revise the price of cane. Ultimately the cane prices were fixed as follows :—

Crushing Capacity (1)	*Minimum price per ton.* (2)
1. Below 300 tons (i.e. 299 tons and below)	Rs. 42-0-0 (inclusive of freight advantage)
2. 300 tons and above, but not exceeding, 1,200 tons.	Rs. 46-12-0 (inclusive of freight advantage)
3. Over 1,200 tons.	Rs. 47-8-0

Mysore Cane Prices for 1948-49

In Mysore the minimum price for cane was fixed by the Government of Mysore at Rs. 42 per ton for the season 1948-49. A cess on cane continued to be levied at the same rate, namely, Rs. 6 per ton. The proceeds from the cess amounted to about Rs. 12 lakhs. It was expected that a large share of this revenue will be utilised for improvement of the cane-growing tracts.

Minimum Cane Price in Madras for 1949-50 Season

The following cane prices were fixed by the Madras Government for the season 1949-50 :

Factories crushing 1,000 tons of cane per day	Rs. 47- 4-0 per ton
Factories crushing between 300 to 1,000 tons per day	Rs. 46-12-0 per ton
Factories crushing less than 300 tons per day	Rs. 42- 0-0 per ton

Minimum Cane Price in Madhya Bharat 1949-50 Season

The Madhya Bharat Government fixed a cane price of Re. 1-10-0 per maund in respect of cane crushed by mills in the State during the season.

No Minimum Cane Price Fixed for Bombay in 1949-50

According to the Deccan Sugar Factories' Association, Bombay, no cane price was fixed for Bombay for 1949-50 season as the factories in the Deccan were growing their own cane.

Minimum Cane Price and Cane Cess in U.P. and Bihar for 1949-50

The cane price for the year 1949-50 season fixed statutorily in the U.P. was Re. 1-10-0 per maund exclusive of the cane cess at the rate of 3 annas per maund. The income from cess during the financial year 1949-50, according to official figures, amounted to Rs. 2,05,38,241. The proceeds from cess were, as usual, merged in the State revenues and no portion was earmarked for any specific purpose, according to the letter No. 17-S/XVIIIC-2141950, from the Under-Secretary to the Government, U.P., Industries and Excise Department, to the Sugar Commission, U.P. and Bihar. No concessions were allowed to factories in 1948-49 and 1949-50 with regard to the postponement of cane prices or cess. In the season 1949-50, a rebate in the cane cess at the rate of Re. 0-1-6 per maund on cane crushed by factories in excess of the quantity consumed in 1948-49 was allowed in Western and Central Regions in the U.P. and a total remission of cess was allowed in the Mid-Eastern and Eastern regions on quantity consumed by factories in 1949-50 season in excess of cane crushed in 1948-49 season. The districts which fell in the Western and Central Regions for the above purpose were, Dehra Dun, Saharanpur, Muzaffarnagar, Meerut, Bijnor, Moradabad, Nainital, Bareilly, Rampur, Pilibhit, Shahjehanpur, Etah, Badaum, Hardoi, Lucknow, Lakhimpur Kheri, Sitapur, Barabanki, and Faizabad. The districts which fell in the Mid-Eastern and Eastern regions were Gonda, Basti, Bahraich, Gorakhpur and Deoria.

To relieve the strain on the finances of the sugar factories, the payment of cess was postponed for all practical purposes as it was in arrears till the end of 1950, and no legal effective action was contemplated till then.

The cane cess for Bihar was also annas 3 per maund.

Cane Cess of 3 Annas per Maund in U.P. and Bihar for 1950-51 Season

The cane cess in U.P. was Re. 0-3-0 per maund in 1950-51, like 1949-50.

As per Notification No. IS-101/50-D-11445 dated the 29th December 1950 issued by the Government of Bihar, Development Department, Patna, a cane cess of 36 pies (or 3 annas) per maund was imposed on all sugarcane entering the local areas of all the 30 factories for consumption, use or sale therein with effect from 1st November 1950. The cane price in Bihar for 1949-50 season was Re. 1-10-9.

Minimum Cane Prices for 1950-51 Season

The Ministry of Agriculture, Government of India Notification No. S.R.O. 1001 dated 6th December 1950 announcing the cane prices for 1950-51 season is as follows:

"In exercise of the powers conferred by clause 3 of the Sugar and Gur Control Order, 1950, and in supersession of the Ministry of Agriculture Notification S.R.O. 792-B dated the 19th October 1950 and S.R.O. 936 dated the 21st November 1950, the Central Government is pleased to fix the price specified in column 2 of the Schedule hereto annexed as the minimum price to be paid by a producer of sugar by vacuum pan process or his agent for sugarcane purchased by him on or after 1st November 1950 during 1950-51 crushing season in the State specified in the corresponding entry Column of the said schedule.

The Schedule

Name of State 1	Minimum Price Per Maund 2		
	Rs.	a.	p.
Bihar	1	12	0
Bombay	1	12	0
Punjab	1	12	0
U.P.	1	12	0
West Bengal	1	12	0
Hyderabad	1	12	0
Madhya Bharat	1	11	0
Mysore	1	12	0
Rajasthan			
(1) Area from which sugarcane is drawn by Bikaner Corporation Ltd., Sri Ganganagar. ...	1	9	6*
(2) Area from which sugarcane is drawn by Mewar Sugar Mills Ltd., Bhupalsagar. ...	1	12	0

* However, by subsequent Notification the cane price was increased for Sriganganagar to Re. 1-13-0. (*Vide* S.R.O. 1139 of 29-12-50).

Provided that the Central Government may, as and where considered necessary *allow suitable rebate in the prescribed price to cover costs of transporting cane* from producing areas by road/rail to a factory."

Cane Price in PEPSU for 1950-51 Season

According to the Ministry of Agriculture, Government of India Notification No. S.R.O. 1038 dated the 8th December 1950, the minimum cane price for Patiala and East Punjab States was fixed at Re. 1-13-0 per maund.

Cane Price in Madras for 1950-51 Season

The Ministry of Agriculture, Government of India Notification S.R.O. 1071 dated 13-12-1950 fixed the minimum cane price for Madras at Re. 1-12-0.

Cane Price in Orissa for 1950-51 Season

As per Notification S.R.O. 1071 dated 13-12-1950 in the Ministry of Agriculture, Government of India, the minimum cane price for Orissa for 1950-51 season is Re. 1-12-0 per maund.

Cane Price in Bhopal for 1950-51 Season

The Ministry of Agriculture, Government of India Notification S.R.O. 1071 dated 13-12-1950 fixed the minimum price of cane in Bhopal for 1950-51 season at Re. 1-11-0 per maund.

Cane Price in Rajasthan for 1950-51 Season

The Ministry of Agriculture Notification S.R.O. 1139 dated 29-12-1950 increased the minimum price of cane in Srinagar area to Re. 1-13-0 from Re. 1-9-6 per maund as originally fixed *vide* S.R.O. 1001 dated 6-12-1950. The minimum price for cane, however, for Srinagar area was Re. 1-12-0 *vide* S.R.O. 1001 dated 6-12-1950.

Cane Price in Travancore-Cochin for 1950-51 Season

According to the Ministry of Agriculture Notification S.R.O. 49 dated 9-1-1951 the minimum price of cane for 1950-51 season in the State was fixed at Rs. 50 per ton.

Average Sugarcane Prices paid by U.P. Factories in 1948-49 and 1949-50

The following is a summary of a statement showing the average cane prices paid by the factories in the U.P. in 1948-49 and 1949-50. It will be seen from the table that in some cases even the price of 1948-49 had not been cleared till the 15th April 1950 (*vide* letter from the Cane Commissioner, U.P., Lucknow, to the Sugar Commissioner, U.P. and Bihar, Kanpur, No. 14445 dated December 23, 1950). It also shows the amount that is in arrears against the factories in the U.P.

Position of Cane Price against U.P. Factories during 1948-49 & 1949-50

No. of Factories	Amount of cane price In lakhs of Rupees in 1948-49			Amount of Cane Price in lakhs of Rupees in 1949-50		
	Due	Paid	Balance	Due	Paid	Balance
66	2670.61	2651.97	16.64	1571.14	1390.33	187.61

The arrears for 1948-49 were against 43 factories out of a total of 66 factories in the U.P. and only 7 factories had paid their dues in full for the year 1949-50. The rest were in balance to the tune of Rs. 187.61 lakhs as mentioned above.

Sales Tax on Sugar in U.P. and Bihar

With effect from 1st April 1949, a single-point sales tax in U.P. is levied at the rate of 2 pies per rupee, payable only by the mills in U.P., or by importes thereof. All exports of sugar from the State to other State in India, if meant for consumption in the other State, are exempt from sales tax in U.P. from 1st April 1950 to 31st March 1951. The sales tax is levied in Bihar on all exports of sugar outside the State at the rate of 3 pies per rupee. The Bihar Government proposed an amendment in 1950 to the Bihar Sales Tax Act, 1947. If the proposed amendment is passed, all goods including sugar meant for consumption in the Bihar State will also be taxed.

Co-operative Societies' Commission (U.P. and Bihar) per Maund of Cane

Year	U.P.	Bihar
1947-48	0-0-3	0-0-3
1948-49	0-0-9	0-0-7½
1949-50	0-0-9	0-0-7½

Deduction for Transport Charges (1949-50)

The U.P. Government allows a deduction in cane price for cane transported by factories through their own means of transport, at the rate of 3 annas per maund per mile, subject to a maximum of 3 annas per maund.

Sales Tax on Sugarcane in Bihar (1949-50)

With effect from 1st April 1950, as per amendment to the Bihar Sales Tax Rules (Amendment 1949), a sales tax on sugarcane is imposed as a result of the deletion of the words " in the manufacture of any goods for sale or " in Rule 18. This amounted to double taxation on sugar, sugar being already a subject of taxation in Bihar. The matter for repeal of the tax is under consideration of the Government and the decision is being awaited in 1951.

"THE SUGAR INDUSTRY AT A GLANCE" (1950)

EVOLUTION OF A NEW POLICY FOR SUGAR (1950-51)

A Brief Chronology of Sugarcane, Sugar and Gur Prices—1949-51

29th November 1949 : The Government of India under Sugar Stocks (Control) Order, 1949, announced the ex-factory prices according to grades for crystal, refined and crushed sugar and fixed the price of E-27 at Rs. 28-8-0 per maund as standard in place of D-24.

7th October 1950 : The Government of India promulgated the Sugar and Gur Control Order, 1950. It superseded the Sugar Stocks (Control) Order, 1949, and provided for regulation of all aspects of sugar, khandsari and gur, such as production, prices, distribution, etc. It envisaged control over these aspects and powers given to State Governments under the Essential Supplies Temporary (Powers) Act were withdrawn. But it retained such powers which were not inconsistent with the Order, such as power to license cane crushers, kolhus, power crushers, etc. This was issued in pursuance of the Tariff Board recommendations for adopting a co-ordinated and uniform policy regarding gur and sugar throughout the country.

18th October 1950 : The Government of India in their Press Note took the following decisions :—

(*a*) Licensing of kolhus (cane crushers), power crushers and khandsari plants in factory areas.

(*b*) The price of sugarcane and sugar was fixed at the level of 1949-50 for the year 1950-51, i.e. at Re. 1-10-0, and Rs. 28-8-0 per maund.

(*c*) For one lakh tons sugar to be produced before December 15, 1950 (which was

afterwards extended to December 22, 1950), Government offered to Western U.P. and the Punjab factories a higher price which was promised to be announced subsequently.

(*d*) Government decided to fix statutory ceilings for prices of gur and khandsari in parity with the prices of sugar and sugarcane. The gur ceiling price was fixed at Rs. 18 for U.P., Bihar and Madras. For deficit areas, the prices were to be fixed little higher upto Rs. 22 per maund. The apprehension that ceilings will also be fixed for khandsari led to fall in the prices of khandsari and an average drop of about Rs. 30 per maund was reported by the middle of November 1950.

29th October 1950 : The Government of India decided to increase the price by Rs. 2-6-0 per maund to sugar factories in U.P. and Bihar, as the factories in West U.P. and the Punjab to which this subsidy was originally allowed were not expected to produce one lakh tons of sugar before the middle of December 1950. The latest date for starting in case of East U.P. and Bihar factories was fixed as November 22, 1950, and the date of excess production was extended to December 22, 1950.

21st November 1950 : The Central Government announced Re. 1-10-9 per maund as the minimum price of sugarcane purchased by the vacuum pan factories in Bihar.

1st December 1950 : The Food Minister's announcement of the new policy regarding gur, sugar and sugarcane prices raising the price of cane from Re. 1-10-0 by annas two to Re. 1-12-0 and that of sugar from Rs. 28-8-0 to Rs. 29-12-0 with concession to Western U.P. (Rs. 30-8-0), East U.P. (Rs. 32), North Bihar (Rs. 31) and South Bihar (Rs. 33) and raising the ceiling for gur from Rs. 18 to Rs. 19 for surplus areas and Rs. 23 for deficit areas or States. The gur prices were subsequently announced. For Bombay the price fixed for gur was Rs. 21, for Calcutta Rs. 21, for Delhi Rs. 20-6-0, Kanpur Rs. 18, Bhagalpur Rs. 20 and Ambala Rs. 19-10-0, etc.

Price Position in Pre-Gur and Gur Control Periods and Changes Contemplated by the New Policy

A clear idea of the price picture on the eve of the Sugar and Gur Control Order, 1950, as well as the changes effected by the new policy announced on December 1, 1950, can be had from the following table :—

(Figures in Rs. As. Ps. per maund)

—	Pre-Gur Control period	Gur Control period	Changes under new policy
	From 3-11-1949 to 7-10-1950	From 7-10-1950 to 1-12-1950	From 1-12-1950 onwards
1. Gur Prices ...	31-8-0 (U.P.) 31-0-0 to 35-0-0 (Meerut)	18- 0-0*	**Surplus States:** 19- 0-0 **Deficit States:** 20- 0-0 23- 0-0 21- 0-0 (Bombay) 21- 0-0 (Calcutta)
2. Sugar Prices ... (ex-factory and controlled)	28-8-0	28- 8-0	29-12-0 (Basic) 30- 8-0 (W.U.P.) 32- 0-0 (N.U.P.) 31- 0-0 (N. Bihar) 33- 0-0 (S. Bihar)
3. Khandsari Prices...	45-0-0 to 60-0-0 (U.P.) 55-0-0 (Meerut)	45- 0-0 to 50- 0-0**	**For Surplus States:** 29- 0-0
4. Cane prices (Minimum) ...	1-10-0	1-10-0	1-12-0

* This was fixed as in normal times the price of gur is half that of sugar.

** In early November 1950 an average drop of about Rs. 30 per maund was noticed as stockists seemed eager to dispose of their stocks before the enforcement of ceiling prices for gur (*vide* Press Information Bureau, G.O.I., Nov. 19, 1950).

The Sugar and Gur Control Order, 1950

On the 7th October 1950, the Government of India promulgated the Sugar and Gur Control Order, 1950. It was made applicable to all States except Kashmir. It superseded the Sugar Stocks (Control) Order, 1949, and provided for regulating and controlling all aspects of sugar, khandsari and gur, such as production, prices, distribution, etc. It provided that all orders and enactments issued by State Governments were cancelled but all orders and enactments not inconsistent with the new order were allowed to remain in force till amended or rescinded by the Central Government.

All powers previously delegated to State Governments with regard to sugar and gur under the Essential Supplies (Temporary Powers) Act were also withdrawn. But such powers as were considered necessary for the licensing of cane-crushers, issue of licences to dealers of sugar and gur, fixation of local wholesale and retail prices, requisition of stocks of gur and khandsari, inspection, search, etc. were being re-delegated under this order. The power to fix sugarcane, sugar and gur prices were reserved by the Government of India to themselves.

The order was of a permissive nature but provided for regulating and controlling all aspects of the sugar, khandsari and gur industry, such as production, prices, distribution, etc. This was in pursuance of the recommendation of the Indian Tariff Board made in their recent report on the sugar industry (1950) for adopting a co-ordinated and uniform policy regarding sugar and gur throughout the country. (For draft of the Sugar and Gur Control Order, 1950, please see *Law and Legislature Section.*)

Fall in Gur and Khandsari Prices—Result of Control

The prices of gur which ranged in the markets of West U.P. between Rs. 30 and Rs. 35 per maund in the third week of October 1950, fell early in November 1950 to the statutory level within the ceiling fixed by the Government. This was as a result of the fixation of the ceiling prices of gur in different States by the Government of India. A fall in the case of khandsari prices was noticed in the early part of November 1950. An average drop of about Rs. 30 per maund in the price of khandsari sugar was noticed, as stockists seemed eager to dispose of their stocks before the enforcement of a ceiling price. It appeared that Government had no intention to issue licences for khandsari manufacture before the end of December 1950 when the ceiling prices were also to be fixed. Cane growers who have been converting their cane into *rab* in the hope of khandsari manufacture starting early, were to take note of this.

It is found that under normal conditions, gur prices are generally half of or a little less than those of white sugar. The ceiling prices of gur of Rs. 18 to Rs. 22 per maund therefore fixed for different States by the Government of India were reasonable as compared with a basic price of Rs. 28-8-0 per maund of white sugar. The Government decided to maintain these prices throughout the year.

Government Measures to Control Prices and Manufacture

On October 18, 1950, the Government of India decided that prices of sugarcane and sugar shall remain at the same level as last year, that is, Re. 1-10-0 and Rs. 28-8-0 per maund respectively.

In order to meet the requirements of the country in sugar until the end of December 1950, it was felt necessary to produce about 1,00,000 tons of sugar within the country before December 15, 1950. With this object, and in view of the low recovery of sugar during this period, Gov-

ernment decided to purchase from Factories in Western U.P. and East Punjab sugar not exceeding 1,00,000 tons produced upto December 15, 1950, at a somewhat higher price.* This higher price was to apply only to new-season sugar produced upto that date.

In order to maximise sugar production by ensuring additional cane supplies to the sugar factories, the Government of India decided that a system of licensing of *kolhus* (cane crushers), power crushers and khandsari plants should be introduced in factory areas. State Governments were delegated the necessary powers under the Essential Supplies Act to give effect to this decision. This was being done with the object of regulating the manufacture of gur and khandsari in factory zones, and to determine the quantity of sugarcane which may be converted into gur and khandsari, without interfering with the supply of sugarcane to the factories.

It was brought to the notice of the Government of India that despite the promulgation of an order for such regulation by the Uttar Pradesh Government a large number of *kolhus* were being set up in factory zones without a licence. " Such setting up and use of *kolhus* was unauthorised and constituted an offence punishable under the law with imprisonment and fine. Such *kolhus* and other apparatus were also liable to be seized and confiscated."

Government viewed with concern the abnormal and unjustifiable rise in prices of gur and khandsari sugar during the year (1949-50). This rise was not warranted by an increase either in the rise of production or the general price level. Government, therefore, decided to fix statutory ceiling prices for gur and khandsari both in producing and consuming areas in parity with the price of sugar and sugarcane. The ceiling price for gur in U.P., Bihar and Madras was to be Rs. 18 per maund. In deficit areas parity prices were decided to be announced a little later.

The ceiling prices for khandsari were not declared though promised in this announcement till the announcement of the new policy on December 1, 1950.

Parity ceiling prices were subsequently fixed for other States. In Orissa, Punjab, PEPSU, Bhopal and Delhi, the ceiling price of gur was Rs. 20 per maund; in Bombay, Madhya Pradesh, West Bengal, Hyderabad, Madhya Bharat, Mysore, Rajasthan, Travancore and Cochin, Vindhya Pradesh, Ajmere, Bilaspur and Tripura States, Rs. 20 per md. and in Assam, Saurashtra, Coorg, Himachal Pradesh, Kutch, Manipur and Andaman and Nicobar Islands Rs. 22 per maund. These ceiling prices came into force with immediate effect, and all transactions of sale or purchase above the ceiling price prescribed for the area concerned were to be illegal and punishable under the law with imprisonment, fine or both. Gur, in respect of which a transaction was entered into above the ceiling price was also liable to be confiscated.

* This was declared to be Rs. 2-6-0 more per maund.

The ceiling price fixed for any area represented the highest price at which gur could be sold or purchased in wholesale or retail in such area and was to include all merchandising charges incidental to such transactions. In case of gur sold on f.o.r. basis, the price was not to exceed the ceiling price.

Palmyra Jaggery Exempted

The Government of India excluded palmyra jaggery from the purview of the Sugar and Gur Control Order, 1950.

Concession to Produce One Lakh Tons Additional Sugar in 1950

On the 28th October 1950 the Government of India announced their decision to maintain *status quo* with regard to the sugarcane and sugar prices, and the ex-factory price of Rs. 28-8-0 per maund for Indian Sugar Standards grade E-27 fixed last year was, therefore, ordered to be in force in 1950-51 also. Government also decided to offer a somewhat higher price to the sugar factories in West U.P. and Punjab for their production upto 15th December on a total quantity not exceeding one lakh tons. This additional price of Rs. 2-6-0 per maund was given to the factories in these areas on their production upto 15th December 1950 during the ensuing season. The payment of the additional price was subject to the following conditions :—

(1) That the factory concerned started regular crushing not later than 15th November 1950, and

(2) that the sugar produced by such factory upto 15th December was more than that produced in the corresponding period last year.

The additional price of Rs. 2-6-0 per maund was to be paid as a subsidy by the Central Government direct on receipt of information in regard to the quantity produced by the mill during the said period duly certified by the Excise authorities.

Additional Sugar Price Concession Extended

On October 30, 1950, the Government of India announced their decision to extend the concession of the additional price of Rs. 2-6-0 per maund to sugar factories in East U.P. and Bihar, as the factories in West U.P. and Punjab, to which this subsidy was originally allowed, were not expected to produce the required quantity of one lakh tons of sugar by mid-December. In the case of West U.P. and Punjab factories the concession was to apply to sugar produced by December 15, 1950, and one of the conditions for being entitled to the concession was that the factories should start working by November 15, 1950, at the latest. Since sugarcane matures a little later in East U.P. and Bihar, and as it would be uneconomical for the factories in those areas to start by November 15, 1950, the latest date for starting in case of East U.P. and Bihar factories was fixed as November 22, 1950, and the date of excess production was similarly extended to December 22, 1950. To be entitled to the addi-

tional price, the production during the period from November 22 to December 22, 1950, was to be more than that upto December 25 in the last season. It was also necessary in the case of factories in East U.P. and Bihar, for getting the benefit of the additional price that they should be certified by the Cane Commissioner concerned, to have sufficient cane in their areas after taking into consideration the crushing capacity of the factory concerned.

Sugarcane price fixed for Bihar

On November 21, 1950, the Central Government fixed Re. 1-10-9 per maund as the minimum price to be paid by a producer of sugar by vacuum pan process or his agent for sugarcane purchased by him during the 1950-51 crushing season in the State of Bihar. This however was increased to Re. 1-12-0 under the sugar policy announced on December 1, 1950.

Salient features of New Policy for 1950-51

The Hon'ble Food Minister, Mr. K. M. Munshi, made an announcement in the Parliament on December 1, 1950, regarding the revision of gur, sugar and cane prices. We give below some extracts from the Food Minister's statement outlining the main features of the new policy regarding revision of prices as an incentive to greater sugar and gur production in 1950-51 season :—

" (1) The licensing of kolhus will not be proceeded with and gur shall be allowed to be manufactured freely.

(2) The ceiling price of gur is fixed at Rs. 19 per maund for the better quality in surplus States against Rs. 18 at present. The ceiling prices in the deficit States will be fixed between Rs. 20 to Rs. 23 per maund for the same quality.

(3) The minimum price of sugarcane will be raised by annas two per maund from Re. 1-10-0 to Re 1-12-0 per maund.

(4) The control on sugar will continue to be exercised and controlled sugar will be sold in the ration shops as at present. *This control, however, will operate only in respect of ten lakh tons of sugar during the year.* Any quantity produced by a factory in excess of 107 per cent of its production in the year 1948-49 or the year 1949-50, as may be fixed by Government in this behalf, will be allowed to be sold by the factory concerned in the free market.

(5) The controlled ex-factory price of sugar is raised to Rs. 29-12-0 per maund against Rs. 28-8-0 per maund at present. However, in the following areas, the prices shown against each would

apply on account of local differences in the cost of production :—

(a) West Uttar Pradesh—Rs. 30-8-0 ;
(b) East Uttar Pradesh—Rs. 32-0-0 ;
(c) North Bihar—Rs. 31-0-0 ; and
(d) South Bihar—Rs. 33-0-0.

(6) In view of the aforesaid rise in the price of sugar the concession of a subsidy to be given by Government on the production upto 15th December 1950 to certain factories in Uttar Pradesh and Bihar is withdrawn."

It was stated that opinion in the Congress Party in Parliament was divided. Mr. Munshi mentioned before a party meeting that the existing system had not worked well and that the licensing of *kolhus* (indigenous crushers) was creating difficulties and was not found to be practicable. On the other hand, if Government adopted a policy of unconditional de-control, it would lead to hoarding and smuggling out of the frontiers. Mr. Munshi, therefore, appealed to the party to leave it to him to formulate a compromise. The announcement was regarded as containing the best points of both the views.

Ex-Factory Price of Sugar for 1950-51 Season

Rs. 29-12-0 per maund for E-27 quality

We give below a Ministry of Agriculture, Government of India, Notification No. S.R.O. 1002 dated 6th December 1950 fixing the ex-factory price of ISS E-27 grade of crystal sugar for different States for the 1950-51 season :

"In exercise of the powers conferred by clause 6 of the Sugar and Gur Control Order, 1950, the Central Government is pleased to fix the ex-factory price specified in column 2 of Schedule I annexed hereto for ISS E-27 grade of crystal sugar produced on or after 1st November 1950 in 1950-51 season by vacuum pan factories in areas specified in the corresponding entry in column 1, of the said Schedule.

Provided (1) that the price differentials for various grades of crystal sugar higher or lower than ISS E-27 grade shall as shown in Schedule II hereto annexed.

(2) that the price differentials for various grades of refined sugar based on the ex-factory price of ISS E-27 grade of crystal sugar, shall be as shown in Schedule III hereto annexed.

(3) that the price differentials for various grades of crushed sugar based on the ex-factory price of ISS E-27 grade of crystal sugar shall be as shown in Schedule IV hereto annexed."

SCHEDULE I

(Figures in Rs. As. Ps.)

AREA	Ex-factory price per maund of 82-2/7 lbs.	AREA	Ex-factory price per maund of 82-2/7 lbs.
Bihar—North ...	31- 0-0		
Bihar—South ...	33- 0-0	West Bengal ...	30- 8-0
Bombay ...	29-12-0	Hyderabad ...	29-12-0
Punjab ...	30- 8-0	Madhya Bharat ...	31- 8-0
Utter Pradesh (West) ...	30- 8-0	Mysore ...	29-12-0
U. P. (East) ...	32- 0-0	Rajasthan ...	33- 0-0

SCHEDULE II

Price Differentials per maund for various grades of crystal sugar based on the ex-factory price of E-27 grades

(Figures in Rs. As. Ps.)

Grade No.	29	28	27	26	25	24
AA	+1- 2-6	+0-15-6	+0-12-6	+ 0-9-6	+0- 6-6	+0- 2-6
A	+0-15-6	+0-12-6	+0- 9-6	+ 0-6-6	+0- 3-0	+0- 0-6
B	+0-12-6	+0- 9-6	+0- 6-6	+ 0-3-0	+0- 1-6	—0- 1-6
C	+0- 9-6	+0- 6-6	+0- 3 0	+ 0-1-6	—0- 0-6	—0- 3-6
D	+0- 6-6	+0- 3-0	+0- 1-6	— 0-0-6	—0- 3-6	—0- 6-6
E	+0- 3-0	+0- 1-6	...	— 0-2-0	—0- 6-6	—0-10-6
F	+0- 1-6	...	—0- 2-0	— 0-5-6	—0-10-6	—0-14-6
G	...	—0- 2-0	—0- 5-6	— 0-9-6	—0-14-6	—1- 2-6

SCHEDULE III

Price Differentials per maund for various grades of refined sugar based on the ex-factory price of E-27 grade of crystal sugar

Grade No.	29	28	27
AA	+ 1-11-0	+ 1- 9-0	+ 1- 7-0
A	+ 1- 9-0	+ 1- 7-0	+ 1- 5-0
B	+ 1- 7-0	+ 1- 5-0	+ 1- 3-0
C	+ 1- 5-0	+ 1- 3-0	+ 1- 1-0
D	+ 1- 3-0	+ 1- 1-0	+ 0-15-0
E	+ 1- 2-0	+ 1- 0-0	+ 0-14-0
F	+ 1- 1-0	+ 0-15-0	+ 0-13-0
G	+ 1- 0-0	+ 0-14-0	+ 0-12-0

SCHEDULE IV

Price Differentials per maund for various grades of crushed sugar based on the ex-factory price of E-27 grade of crystal sugar

Grade	Differentials		
	Rs.	As.	Ps.
13		...	
12	0	3	0
11	0	7	0

Explanations :

(1) The grades mentioned in this Notification shall be according to the Indian standards prescribed by the Bureau of Indian Institute of Sugar Technology and the grading will be done according to the instructions issued by the Bureau of Sugar Standards from time to time.

(2) "Refined sugar" means sugar manufactured by re-melting ordinary sugar in water, and by suitably treating and filtering the solution and recovering sugar therefrom after boiling in vacuum pans, the resulting sugar having colour not lower than Indian Sugar Standard No. 27 and being sufficiently pure to satisfy the test namely :—

The specific conductivity determined at 35°C and multiplied by 10^6 of a solution prepared by dissolving 5 grams of sugar in conductivity water and making upto 100 c.c., should not exceed 15, after deducting the value for the specific conductivity at the same temperature and multiplied by 10^6 of the conductivity water used.

The factories included in each of the specified areas are 33 in East U.P., 33 in West U.P., 25 in North Bihar and 5 in South Bihar.

New Prices for 1950-51 Season Effective from 1st November 1950

According to the Honourable Minister for Agriculture, the new prices for 1950-51 season are effective from 1st November 1950 and the carried foraward stocks are to be charged at the last year's price, namely Rs. 28-8-0 per maund for E-27 quality.

Informal Rationing for Sugar in 1950-51

On December 20, 1950, it was announced that there will be no statutory rationing of sugar, but it will continue to be distributed on the present scales through ration shops on an informal basis. It was also stated that there will be no ban on Inter-State movement of sugar.

As a result of the reconsideration of the sugar and gur policy for the current season, the Government came to the conclusion that in the present circumstances, when adequate imports are not possible, complete decontrol of sugar is likely to result in hoarding and profiteering on a large scale, leading to grave hardships to a considerable number of consumers. The alternative is, it was stated, to continue control, but operate it in such a manner that it will give the advantage of decontrol as far as possible. It was therefore decided to regulate distribution of sugar out

of the minimum quantity of sugar produced from the factories, leaving surplus produced to a free market. Each factory, it was stated, will be free to dispose of its production in excess of its basic quota plus 7 per cent in a free market, at a price without any restriction on it or on the distribution of the surplus sugar. The allocation of factory stocks was to continue to be made as before.

Open Market in Sugar after achieving Target Production

The Ministry of Agriculture, on December 24, 1950, published the following clarification on the free market sale of sugar :

(*a*) "The current year's production of sugar will not be allowed to be sold by any factory directly or indirectly in the free market till it has achieved the target production to be fixed by Government for the current season and has received a release order to that effect. Any factory selling its production in the free market otherwise than above, would be committing a breach of law ;

(*b*) Controlled distribution of sugar on the existing scales of rationing will continue in all the States, at the prices fixed, for which the Government of India will procure from the factories one million tons at prices already announced. The allocation of factory stocks to the various State governments will thus continue to be made as before, as far as this quantity of one million tons is concerned, and the quantity so supplied will continue to be distributed to the consumers under the provisions of the Sugar and Gur Control Order of the Government of India ;

(*c*) The permission for sales in the free market in order to bring out illicit hoarded stocks will enable consumers to purchase sugar at free market prices apart from the ration distributed under the control order at controlled prices even from now. But it should be clearly understood that no factory will be permitted to sell sugar in the open market until it achieves its individual target production and then only to that extent of the excess over it.

(*d*) Movement of stocks of sugar for free market, as aforesaid, within a State will be without any restriction ; but no movement from one State to another will be allowed except under a permit issued by the Central Government."

No Free Market Sales of Sugar unless Government secures 10 Lakh Tons for Controlled Distribution

No free sales of sugar produced in 1950-51 will be allowed under the new policy unless Government has secured 10 lakh tons for controlled distribution in 1951-52. This will be clear from the following criteria laid down by the Government for determination of the basic production quota, which would be procured by them from factories, for controlled distribution :

(1) The basic production quota for individual factory will be the average of its production during the years 1948-49 and 1949-50 plus 7 per cent.

(2) In the case of factories mentioned at (*a*) and (*b*) below, however, the basic production quota will be their production during the year 1948-49 or 1949-50, whichever is less, plus 7 per cent.

(*a*) Such factories in the West U.P. and Punjab as have started crushing of cane for 1950-51 season not later than 15th November 1950, and such factories in East U.P. and Bihar as have started crushing not later than 22nd November 1950.

(*b*) Such factories in India, the production of which exceeds the average of their production during 1948-49 and 1949-50 plus 7 per cent.

(3) In the case of factories which may not have worked during one of the two or both years 1948-49 and 1949-50, or whose working was not normal during these years, the basic quota will be fixed on an *ad hoc* basis.

(4) Government will take over the production of all factories upto the limits of their basic production quotas as specified at (1) to (3) above. The deficit, if any, for making up the total of 10 lakh tons would be recovered from all factories to which the proviso would apply, in proportion to their individual average production for the two years 1948-49 and 1949-50.

(5) Government have further made it clear that no factory should start free sales of sugar without obtaining prior permission from them, and no such permission will be granted unless Government are reasonably sure of securing 10 lakh tons for controlled distribution during the current year.

The point that rationing requirement of 10 lakh tons is to be fulfilled first by the industry before obtaining requisite permission for free sales of sugar was clarified by the Hon'ble Food Minister, Mr. K. M. Munshi, in his speech at the 14th meeting of the Indian Central Sugarcane Committee held on 27th January 1951 when he observed :

"*Under the new scheme you have got the securing of minimum quantity of sugar required for rationing, and at the same time, you have got the price incentive which is given by a free market of sugar and which can be taken to any height which your capacity for the growing scarcity might need.*"

The same point was stressed by the Hon'ble Food Minister, Mr. Munshi, in Parliament on February 21, 1951, when he urged the need to procure 10 lakh tons to maintain rationing, before permitting free market sales. He further observed that "the new policy has the merit of giving Government 10 lakh tons which would be enough to meet Government normal rationing requirements".

Government of India permits sale of Sugar in Free Market from March 10, 1951

On March 10, 1951, the Government of India announced that sugar factories would be allowed to sell in free market their excess production over the basic quota fixed in this respect by the Government for each factory. The production of a number of factories having exceeded the basic quota, the Government took a decision to release the excess production of such factories for free sale, after keeping a reasonable margin out of their excess production in reserve for ensuring Government's share of 10 lakh tons in the year's production for controlled distribution. It was decided to fix quota of release of each factory time to time and to issue permits in respect of each factory.

As a result, for the first time since the Government of India decided to allow sugar factories to sell the surplus sugar at any price, on 17th March 1951, dealings to the tune of 3,000 bags were reported in the Bombay sugar market at prices ranging from Rs. 165 to Rs. 170 per bag of 210 lbs. or Rs. 56 to 57 per Bengal Maund, f.o.r. (Bombay). Thus the consumer was able to get sugar in free market around annas 12 per lb. from 20th March 1951, as against the blackmarket price of Re. 1 to Re. 1-8-0 per lb. before that date.

Maximum prices of Gur for 1950-51 season at which Gur may be sold in different States

The following Notification No. S.R.O. 1000 dated 2nd December 1950 was issued by the Ministry of Agriculture, Government of India, New Delhi :

" In exercise of the powers conferred by Clause 6 of the Sugar and Gur Control Order, 1950, and in supersession of the Notification of the Government of India, Ministry of Agriculture, S.R.O. 799, dated the 25th October 1950, the Central Government is pleased to fix the price specified in column 2 of the Schedule hereto annexed as the Maximum price at which gur may be sold or delivered in the State specified in the corresponding entry in column of the said Schedule.

" Provided that any authority to whom powers under the said clause are delegated may with the previous approval of the Central Government *fix any higher maximum price for any specified area or quality of gur.*"

THE SCHEDULE

Name of State	Maximum Price per maund of 82-2/7 lbs. (Rs.)	Name of State	Maximum Price per maund of 82-2/7 lbs. of gur. (Rs.)
Assam ...	23	Saurashtra ...	23
Bihar ...	19	Travancore-Cochin	22
Madhya Pradesh ...	22	Vindhya Pradesh ...	22
Madras ...	19	Ajmer ...	22
Orissa ...	21	Bhopal ...	21
Punjab ...	21	Bilaspur ...	22
U. P. ...	19	Coorg ...	23
W. Bengal ...	22	Delhi ...	20
Hyderabad ...	21	Himachal Pradesh ...	23
Madhya Bharat ...	22	Kutch ...	23
Mysore ...	22	Manipur ...	23
Pepsu ...	21	Tripura ...	22
Rajasthan ...	22	Andamans & Nicobar	23

Vide Ministry of Agriculture Notification No. S.R.O. 1070 dated 13-12-1950 the maximum price of gur in Bombay was fixed at Rs. 23 per maund.

It is to be noted that under the proviso in the Ministry of Agriculture Notification No. S.R.O. 1000 dated 2-12-1950 certain State Governments have been allowed to fix higher maximum prices of gur for specified areas or qualities of gur.

Ceiling prices of Khandsari for 1950-51 season

The Ministry of Agriculture Notification No. S.R.O. 1003 dated 6-12-1950 fixed Rs. 29 as the maximum price per maund for khandsari for the following 30 districts in the U.P. :

Saharanpur, Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Manipur, Etah, Bareilly, Bijnor, Rampur, Budaun, Moradabad, Shajahanpore, Pilibhit, Farrukhabad, Etawah, Banares, Mirzapur, Jaunpur, Ghazipur, Ballia, Gorakhpur, Deoria, Basti, Azamgarh, Sitapur, Hardoi, Kheri, Gonda, and Bahraich.

In other districts of the U.P. and other States, however, though the price was fixed to be Rs. 29 per maund, *yet a concession regarding transport and incidental charges as approved by the Central Government for crystal sugar is granted over and above the price of Rs. 29 per maund.*

Ban on Movement of Factory, Khandsari and Bura Sugar

On 9th February 1951, it was announced that the Government of India have banned the inter-State movement of khandsari sugar and bura by rail, road or water with immediate effect. The inter-State movement of factory sugar had been banned previously. No crystal or khandsari sugar or bura can now be transported from any place situated in one State to any place situated in another State, except under permits issued by the Central Government, or under a military credit note.

Such sugars not exceeding one seer, can, however, be carried as part of the personal luggage of a bona fide traveller.

Price of Bura Sugar and Sugar-Candy (1950-51)

Under a notification published in the Gazette of India in January 1950, the Government of India directed that the wholesale and retail prices at which bura sugar shall be sold or delivered in any area or market, shall not exceed the wholesale and retail price respectively of crystal sugar produced by vacuum pan factories fixed for that area or market.

The wholesale and retail price of sugar-candy similarly shall not be more than Rs. 5 per maund above the wholesale and retail price respectively fixed for crystal sugar produced by vacuum pan factories for that area or market.

There is, however, no control on the price of sugar-candy produced from palm juice or palm jaggery.

No Restrictions on Palm-Sugar (1950-51)

The Government of India, *vide* S.R.O 996 dated 1-11-1950 have removed palm jaggery from the perview of the Sugar and Gur Control Order, 1950. There is no control on the price of sugar or candy manufactured from palm juice. There are also no restrictions on the movement of these products.

Retail price of Cube Sugar for 1950

The Government of India in the Ministry of Agriculture issued a notification on the 9th February 1950 directing that the retail price of cube sugar throughout the Indian Union shall not exceed Re. 0-11-0 per one lb. package and Re. 0-9-9 per lb. when sold in 5 lbs. package.

It should be noted that cube sugar is not controlled.

Ex-Factory prices for E-27 Sugar for 1950-51 season in Madhya Bharat

From a subsequent letter dated 14th January 1950 addressed by the Joint Secretary, Ministry of Agriculture, to the Director of Civil Supplies, Madhya Bharat, it appears that the following ex-factory prices for E-27 grade sugar had been fixed for sugar factories in the Madhya Bharat Union :—

Jaora Factory	.. ..	Rs. 30-4-0 per maund of sugar
Dalauda Factory	.. ..	Rs. 31-9-3 „ „ „ „
Dabra Factory	.. ..	Rs. 31-8-0 „ „ „ „
Sarangpur Factory	..	Rs. 32-4-0 „ „ „ „
Mehidpur Factory	..	Rs. 32-4-0 „ „ „ „

Further, a freight advantage of Re. 1-4-0 per maund had been granted to Messrs Bhopal Sugar factories, Sehore, by the Government of

India as per their letter dated 14th January 1950 addressed to the Managing Agents of the above mill.

Allowances for Transport Charges of Sugarcane in U.P.

The deduction for the cost of transport to factories using their own means of transport in the U.P. was 3 pies per mile per maund subject to maximum of 3 annas per maund from the price of cane purchased at a purchasing centre. The industry in the U.P. had, however, demanded in 1950 that the maximum limit of deduction should be raised to 4 annas per maund of cane and that the maximum limit per maund per mile should be increased from the present figure of 3 pies to 4 pies.

LAW AND LEGISLATION

Sales Tax Continuance Order, 1950, Effective from April 1950 till 31st March 1951

According to this Order sales tax continues to be lawfully levied on sale or purchase of goods as was levied by the Government of any State immediately before the commencement of the Constitution until the 31st day of March 1951 from 1st April 1950, notwithstanding that the imposition of such a tax was contrary to the provisions of Clause (2) of Article 286 of the said Constitution.

Exports of Sugar exempted from Sales Tax in U.P.

As a result of this Order and subsequent Order of the Under-Secretary to the Government of U.P., exports of sugar outside the U.P. State are exempt from sales tax in U.P. provided the export is meant for consumption in the State importing it.

Sales Tax in U.P. and Bihar 1949-50 and 1950-51

With effect from 1st April 1949, sales tax is levied in U.P. at the rate of Re. 0-0-2 (two pies) per rupee, as against 3 pies per rupee prior to that date. It is a single point tax and no rebate in the tax is allowed in respect of exports. Till 1st April 1949, the tax was levied at 3 pies per rupee, at a single point, with rebate of one-half of the tax on such quantities as were actually exported outside U.P. to other States in India. In Bihar the sales tax was levied on all exports of sugar at the rate of 3 pies per rupee. An amendment to the Bihar Sales Tax Act, 1947, is proposed in the Bihar Government Finance Bill, 1951, in the middle of February 1951. For the purposes of sales tax, if the amendment is passed, all goods delivered in Bihar for consumption will be deemed to have been sold in Bihar, and will be liable to sales tax in Bihar. The term, "registered dealer" is amended to mean "a dealer liable to pay tax under this Act".

Starting and Closing of Factories in Bihar

An amendment to Rule 18 of the Bihar Sugar Factories Control Rules was notified on 23-12-1949 directing the sugar factories in the State to abide by the instructions of the State Government in the matter of closing and starting of factories.

The Punjab Sugar Factories Act, 1950

The Act was passed early in March 1950 with a view to replace an earlier ordinance providing for licensing sugar factories and regulating the supply and price of sugarcane for use in such factories.

The Bill introduced to this effect provided for imposition of *a cess not exceeding 12 pies a maund* on the entry of sugarcane into a local area specified in such a notification for consumption, use or sale therein. *However, the cess clause was deleted before the Bill was enacted owing to the opposition from the members in the Assembly.*

The Sugar and Gur Control Order, 1950

Notification No. S.R.O. 735 dated the 7th October 1950 issued by the Ministry of Agriculture, Government of India, New Delhi

In exercise of the powers conferred by Section 3 of the Essential Supplies (Temporary Powers) Act, 1946 (XXIV of 1946), the Central Government is pleased to make the following Order :—

1. **Short Title and Commencement**

(1) This Order may be called the Sugar and Gur Control Order, 1950.

(2) It extends to the whole of India except the State of Jammu and Kashmir.

(3) It shall come into force at once.

2. In this Order unless the context otherwise requires :—

(*a*) " Dealer " means a person carrying on the business of purchasing, selling or distributing sugar or gur or both.

(*b*) " Ex-factory price " means the price of sugar inclusive of excise duty, packed in accordance with the usual market practice and loaded at the buyer's option on buyer's carts, lorries or other means of transport, or into railway wagons at the railway station or siding generally used by the producer, and includes all incidental charges which are on account of the ex-factory seller.

(*c*) " Gur " means the article commonly known as Gur, Gul, Jaggery, *Palmyra jaggery*,* Shakkar and rab, and includes raw sugar and uncrystallised sugar in any other form comprising of original and convertible molasses and other impurities, inherent or foreign, prepared by boiling cane or palmyra juice.

* Deleted *vide* S.R.O. 996 dated 1st November 1950.

(*d*) " Producer " means a person carrying on the business of manufacturing sugar or gur or both.

(*e*) " Sugar " means : —

(i) any form of sugar containing more than 90 per cent of sucrose including khandsari sugar, sugar-candy and bura sugar ; and

(ii) any sugar of crystalline structure.

3. Power to fix minimum price for Sugarcane

(1) The Central Government may, after consultation with such authorities, bodies or associations as it may deem fit, by notification in the Official Gazette, from time to time, fix in respect of any area the minimum price to be paid by a producer or his agent for sugarcane purchased by him in that area.

(2) No person shall sell or agree to sell sugarcane to a producer and no producer shall purchase or agree to purchase sugarcane at a price lower than that notified under this clause.

4. Power to regulate movement of Sugarcane and production and movement of Gur and Sugar

(*a*) prohibit or restrict the export of sugarcane from any area,

(*b*) direct that no gur or sugar shall be manufactured from sugarcane except under and in accordance with the conditions specified in a licence issued in this behalf.

(*c*) prohibit or restrict the despatch of gur or sugar from any State or any area therein.

5. The Central Government may by general or special order direct that no person shall transport or offer or accept for transport, whether by rail, road or water, all or any specified type or grade of sugar except under : —

(*a*) a general or special permit issued in this behalf, and
(*b*) a Military Credit Note.

Provided that nothing in this clause shall apply to the transport of sugar not exceeding *one seer** as part of the personal luggage of a bona fide traveller.

6. Power to fix Sugar and Gur price

(1) The Central Government may, from time to time, by notification in the official Gazette fix the price or the maximum price at which any sugar or gur may be sold or delivered, and different prices may be fixed for different areas or different types or grades of sugar or gur.

* Amended from 5 seers to 1 seer only.

(2) Where the price or the maximum price has been so fixed, no person shall sell or purchase or agree to sell or purchase any sugar or gur at a price in excess of that fixed under sub-clause (1).

Povided that the price at which sugar may be sold for delivery otherwise than at ex-factory price shall not exceed the price or the maximum price, as the case may be, fixed under sub-clause (1) for sale at ex-factory price plus such charges, in respect of transport to or in specified areas and other incidental charges as are approved by the Central Government.

7. **Power to Allot Quotas of Sugar and Gur**

The Central Government may, from time to time by order,

(i) allot quotas of sugar or gur to any specified State or area, and

(ii) issue directions to any producer or dealer to supply sugar or gur of such type or grade, in such quantities to such areas or markets or to such persons or organisations and at such prices as may be specified in the Order.

Provided that where the price or maximum price of any sugar or gur has been fixed under sub-clause (1) of clause 6 the Central Government shall in respect of such sugar or gur specify in the order the price or the maximum price, as fixed.

8. **Power to issue Directions to Producers and Dealers**

The Central Government may, from time to time, by general or special order issue to any producer or dealer or any class of producers or dealers such directions regarding the production, maintenance of stocks, sale, price, grading, packing, marking, weighment, disposal, delivery and distribution of sugar or gur as it may deem fit.

9. Any Officer empowered in this behalf by the Central Government may :

(*a*) direct any producer or dealer to maintain such records as he may specify,

(*b*) direct any producer or dealer to furnish such information as he may require,

(*c*) inspect or cause to be inspected any books or other documents belonging to or under the control of a producer or a dealer, and

(*d*) enter and search or authorise any person to enter and search any premises of a producer or a dealer.

10. Every producer, dealer or other person to whom any order or direction is issued under any powers conferred by or under this order shall comply with such order or direction.

11. The Central Government may, by notification in the Official Gazette, direct that all or any powers conferred upon it by this order

shall, subject to such restrictions, exceptions and conditions, if any, as may be specified in the direction, be exercisable also by :—

(a) any officer or authority of the Central Government, and

(b) a State Government or any officer or authority of a State Government.

12. (1) The following Orders are hereby repealed :—

(a) The Sugar Stocks (Control) Order, 1949 ; and

(b) any Order made by a State Government or other authority regulating or prohibiting the production, supply and distribution of sugar or gur and trade and commerce therein which is inconsistent with the provisions of this Order.

(2) An Order made by any authority, which is in force immediately before the commencement of this Order and which is consistent with this Order, shall continue in force and all appointments made, prices fixed, licences and permits granted, and directions issued under any such Order and in force immediately before such commencement shall likewise continue in force and be deemed to be made, fixed, granted or issued in pursuance of this Order.

S.R.O. 736.—In exercise of the powers conferred by Section 4 of the Essential Supplies (Temporary Powers) Act, 1946 (XXIV of 1946), the Central Government is pleased to cancel all notified Orders under the said section to the extent that they empower any State Government or other authority to exercise the power to make an Order under Section 3 of the said Act in relation to Sugar and Gur.

S.R.O. 737.—In exercise of the powers conferred by clause 8 of the Sugar and Gur Control Order 1950, the Central Government is pleased to direct that no producer who produces sugar by the vacuum pan process shall sell or otherwise dispose of such sugar except under and in accordance with a permit issued in writing by the Central Government or any officer authorised by it in that behalf.

Revenue Concessions to increase production in 1949-50 season

At the instance of the late Sardar V. Patel, the then Deputy Prime Minister, the sugar industry was assured in November 1949 of certain concessions with a view to maximise sugar production in the 1949-50 season. Accordingly, the excess cane crushed by mills during 1949-50 season was exempt from payment of the provincial cess. Similar concession was offered by U.P. Premier, though no official announcement was made to the effect by the U.P. Government. Factories in Central and Western U.P. were to be granted remission of 50 per cent of cane cess

on extra cane and that the balance 50 per cent, when realised, was to be paid to the mills in Eastern U.P. by way of compensation to them in addition to the total remission of cess on excess cane crushed by them.

In May 1950, the Bihar Government announced a rebate of 3 annas per maund of extra sugarcane crushed during the 1949-50 season as compared with the 1948-49 season. The concession was, however, subject to the factories clearing of, by June 25, 1950, the entire dues of cane development and cane marketing unions and cane growers' co-operative societies on account of commission.

The U.P. and Bihar Sugar Commission

In August 1940, the U.P. and Bihar Governments set up a "Joint Sugar Commission which was to be the final authority, subject to Government control, on all matters connected with the production and sale of sugar, as well as other matters, regarding cane price, etc.". It may be observed that since the institution of the central control over the industry, the Sugar Controller for India exercises some of the powers relating to sale, cane price fixation, etc. in the interest of an all-India policy and to the extent directs the Sugar Commission and its Chairman in the discharge of their duties.

The Composition of the Sugar Commission for U.P. and Bihar (1950-51)

The present personnel of the Commission as on 21st Nov. 1950 and onwards for 1950-51 for U.P. and Bihar located at Kanpur is as follows :

(1) Shri O. N. Misra, Sugar Commissioner, U.P. and Bihar (Chairman).

(2) Shri A. D. Pant, Cane Commissioner, U.P. (Member).

(3) Shri J. Prasad, Cane Commissioner, Bihar (Member).

U.P. and Bihar Sugar Factories Control Act

In December 1949, the Bihar Government introduced a Bill to extend the life of the Bihar Sugar Factories Control Act and it was extended till 30th June 1951. A similar Bill was passed on 14th June 1950 by the U.P. Legislative Assembly to extend the life of the U.P. Sugar Control Act, 1938, for two years till June 1952. The Bihar Amendment also emproves the Government to increase the cess to 3 annas per maund as in U.P. It may be recalled that in 1949 the Bihar Act was amended whereby sugar factories were exempted from the compulsion to become members of the Indian Sugar Syndicate Ltd. They are now free to join any sales organisation approved by the Bihar Government.

Composition of the U.P. Technical Committee for 1950-51

(1) The Director, Indian Institute of Sugar Technology (Ex-Officio), Chairman.

(2) The Cane Commissioner, U.P. (Ex-Officio).

(3) The Cane Commissioner, Bihar (Ex-Officio).

(4) Shri S. K. D. Bhargava, Upper India Sugar Mills Ltd., Khatauli (Muzaffarnagar).

(5) Shri A. Caws, Kanpur Sugar Works Ltd., Marhowarah (Saran).

(6) Shri S. K. Choudhury, Bihar Sugar Works Ltd., Panchrukhi (Saran).

(7) The Technical Inspector for Sugar Factories in U.P. (Ex-Officio), the Secretary to the Committee.

Composition of U.P. and Bihar Sugar Control Board, 1950-52

1. The Hon'ble Minister for the time being of the Uttar Pradesh Government in charge of Development.
2. The Hon'ble Minister for the time being of the Bihar Government in charge of Development.
3. Shri Karamchand Thapar, 53/4, Hazra Road, Calcutta.
4. Shri K. K. Birla, 8, Royal Exchange Place, Calcutta.
5. Shri R. L. Nopany, 178, Harrison Road, Calcutta.
6. Shri Desh Raj Narang, Basti Sugar Mills Co., Ltd., Basti.
7. Shri C. O. Malley, Begg Sutherland & Co., Ltd., Kanpur.
8. Shri Thakur Phool Singh, M.L.A., Vakil, Saharanpur.
9. Shri Har Sahai Gupta, M.L.C., Shankar Agricultural Farm, Bilari (Muradabad).
10. Shri Virendra Varma, Chairman, District Board, Muzaffarnagar.
11. Shri Choudhary Kalika Prasad Roy, Dumraon, District Shahabad (Bihar).
12. Shri Nand Kishore Narain Lal, M.L.A., Bihar.
13. Pandit Gana Shankar Pandey, C/o Messrs. Pandey Bros., 52/20, Shakkar Patti, Kanpur.
14. Shri Brij Kishore Shastri, C/o The Socialist Party Office, Pan Dariba, Lucknow.
15. Shri Kedar Pande (Bihar).
16. The Secretary to the Government of Bihar, Development Department, Patna.
17. The Secretary to the Government of Uttar Pradesh in Industries Department.

The Hon'ble Minister of the Uttar Pradesh Government in charge of Development is the *ex-officio* Chairman of the Board.

The Secretary to the Government of Uttar Pradesh in the Industries Department is the *ex-officio* Secretary to the Board.

Levy of Licence Fees on Sugar Factories in U.P. by District Boards

It was reported that the District Boards in U.P. had framed bye-laws to levy annual licence fees varying from Rs. 500 to Rs. 4,000 per

factory. The Ministry of Agriculture being moved in the matter by the Indian Sugar Mills has already referred the matter to the U.P. Government. Final reply was not received till January 1951.

So also a tax of one anna per rupee on income was levied by the U.P. Gram Panchayat on factories in the Meerut areas in 1949-50.

Export of Molasses Banned in 1949-50

There was a complete ban on the export of Indian molasses outside the country. Complaints of difficulties caused to mills in Bihar, U.P. and other States owing to accumulated stocks of molasses were current during the year. The price for molasses ruling in Pakistan and other neighbouring countries was Rs. 7 per maund and it was estimated that, if the export was permitted, it would have helped the Government in securing foreign exchange to the tune of Rs. 15 to 20 lakhs. The export of molasses from Bombay and Madras to U.S.A. is reported to be under consideration of the Government of India still.

Import Duty on Sugar Machinery, 1949-50

The Import duty on sugar machinery was increased from 5 per cent to 10 per cent. Sugar machinery-items were separately classified. The import duty in 1948-49 was 5 per cent being reduced from 10 per cent in 1947-48 on October 23, 1948.

INDIAN CENTRAL SUGARCANE COMMITTEE

The Government of India announced their decision to set up a Central Sugarcane Committee by a resolution No. F41-24|43A, dated 6th June 1944, of the Education, Health and Lands Department.

Formation of the Indian Central Sugarcane Committee in 1944

This Committee was inaugurated on the 29th November 1944, by the late Sir Jogendra Singh, the then Hon'ble Member-in-Charge of the Department of Education, Health and Lands, Government of India. The Committee was fully represented by various interests, viz. the growers, the manufacturers, the traders and the consumers, so that the industry in all its important branches was fully represented in the Indian Central Sugarcane Committee. It is well recognised that representation of all interests is essential for the achievement of a co-ordinated policy. Originally the Committee had 45 members in all on its rolls, of whom sixteen were *ex-officio* members, including the *ex-officio* President, nine representatives were nominated by the Indian Sugar Mills' Association, there were three nominess of the Sugar Trade, one of the Sugar Factory-owners, four representatives of the Gur and Khandsari, three of the consumers, one nominee of the Sugar Technologists' Association. There were eight non-officials, representing agricultural interests, nominated respectively by the Governor-General-in-Council and the Governments of Madras, Bengal, Bihar, United Provinces and the

Punjab. To this number of members the Sugar Controller for India and one representative of the Industries and Civil Supplies Department of the Government of India were subsequently nominated by the Governor-General-in-Council.

Prior to the formation of the Indian Central Sugarcane Committee, the responsibility for guiding sugarcane research in India and of advising the Central and Provincial Governments on matters relating to improvement and development of the industry, connected with sugarcane and its products, rested mainly with the Sugar Committee, appointed by the Imperial Council of Agricultural Research, and partly with the Imperial Institute of Sugar Technology, Cawnpore, which was under the direct control of the Government of India.

Funds of the Committee *

The proceeds of the Sugar Excise Fund, to which funds are credited at the rate of one anna per cwt. of white sugar produced in British India, out of the Excise Duty levied thereon, were utilised for the maintenance of the Imperial Institute of Sugar Technology and for sanctioning grants to the Provincial Governments for expenditure in connection with schemes of sugarcane research and development.

On the formation of the Indian Central Sugarcane Committee in November 1944, the responsibility for undertaking the improvement and development, marketing and manufacture of sugarcane and its various products in India, and of all matters incidental thereto, were vested in the Committee. The main lines of work undertaken by the Indian Central Sugarcane Committee, either under its direct control or through schemes subsidised by it included :—

(i) the production, distribution and testing of improved varieties of sugarcane under different sets of soil and climatic conditions ;

(ii) the testing of improved cultural, manurial and irrigation practices ;

(iii) the study of sugarcane diseases and pests, including the biological control of borers, etc. ;

(iv) the technological and economic research on sugar and its by-products ;

(v) the manufacture of khandsari sugar and gur, by improved methods ;

(vi) the grading and storage of white sugar, khandsari sugar and gur ; and

(vii) the improvement of crop forecasting and sugar statistics.

* From 1947-48, the grant was increased from Re. 0-1-0 to Re. 0-4-0 per cwt. The Government decided to curtail the grant in view of the financial stringency, and the Committee was asked to proceed on the assumption of the grant being fixed at Re. 0-1-0 per cwt.

During the year 1948-49 the Committee continued to maintain the Indian Institute of Sugar Technology which serves as a teaching, as well as a research institution and which is also responsible for the maintenance of Sugar Standards, preparation of the returns under the Sugar Production Rules, Sugar Trade Information Service and for taking up any other special work connected with sugar as and when required by Central or Provincial Governments.

The 13th Meeting of the Indian Central Sugarcane Committee

The 13th meeting of the Indian Central Sugarcane Committee ended its two-day session in New Delhi on February 28, 1950, after referring to its Finance Sub-Committee a proposal to appoint a small sub-committee to negotiate with the Government of India on the reconstitution of the Indian Central Sugarcane Committee, so that all problems connected with the sugar industry could be entrusted to one central agency.

The Committee also passed by a majority a resolution to give encouragement to the manufacture of gur and to enlarge the scope and efficiency of this important cottage industry.

" Country can't afford large Sugar Imports "

Addressing the meeting of the Indian Central Sugarcane Committee in New Delhi on February 27, 1950, Sardar Datar Singh, the then President, emphasized the necessity of the Indian sugar industry being able to meet the full demand for sugar at cheap and world-parity prices. He stated that the country was not in a position to import large quantities of sugar. We share his view in this respect.

The installed capacity of the Indian sugar mills is estimated at about 1.4 million tons per annum and the present target of our production is only 1.1 to 1.2 million tons. With its present equipment, therefore, the industry should be capable of securing this production. The efficiency of Indian sugar mills is not very low and with certain improvements here and there and the assurance of providing adequate quantities of quality cane for crushing, it is expected that the industry would be able to provide the consumer with sufficient sugar. There is no reason, therefore, why with a properly planned programme and determined effort it should not be possible to prevent an undue soaring of prices of sugar in future.

Sardar Datar Singh was right when he suggested that the Government should reconsider their decision to reduce the normal grant of the Committee from annas four to anna one per cwt. of sugar produced. Government's efforts for economy under the present financial condition were justifiable, but should obviously be guided by discrimination between essential and non-essential items and those that could be deferred without harmful effects.

The Chairman revealed that the five-year scheme for the development of the sugarcane industry had been initiated in most of the sugar producing States of the Indian Union. If this scheme progressed satis-

factorily, it was hoped that the target set for the five-year period to intensify cane cultivation would be reached and some land now under cane released for the production of food and other essential commodities.

The 14th Meeting of the Indian Central Sugarcane Committee

The 14th meeting of the Central Sugarcane Committee was held in New Delhi on 26th and 27th February 1951, when Shri Dip Narain Singh Vice-President, presided, and the Hon'ble Shri K. M. Munshi, Minister for Agriculture and Food, addressed the meeting on February 27, 1951. Stressing the importance of research for increasing the yield and improving the quality of cane, the Vice-President observed, "the main problem of the sugar industry remains as ever before, the problem of raising the acre-yields of high quality raw material and this problem is linked up with provisions of wherewithals to the cultivating interests". The grant to the committee, he complained, was withdrawn. So also the Government not having allowed any expenditure to be incurred on the Bhadruk Institute of Sugarcane Research and Sugarcane Technology, it has been left at the stage it was. Want of finance for research was the main complaint of the Vice-President. He thus very rightly observed that without adequate funds and a certain degree of autonomy much headway could not be made in the development and research work to improve the prospects of the sugar industry. He also emphasized the need for proper planning and organisation so that the country is able to produce 1.2 million tons in the 1950-51 season. The Vice-President was however of the opinion that the *ad hoc* decisions, prices and concessions to the industry cannot lead to permanent solution of the problem, as the sugar industry was essentially an agricultural industry and needed improvement in the yield and quality. He observed that given the necessary facility, the Sugarcane Committee was bound to deliver the goods not in the shape of big voluminous reports but in the shape of more sugarcane, more sugar and more gur.

Problems of the Sugar Industry

Replying to the welcome address by the Vice-President, Shri K. M. Munshi, the Food and Agriculture Minister, Government of India, gave a very clear analysis of the problems confronting the industry, and showed how the new policy of sugar adumbrated by him for the 1950-51 season was the only alternative, under the circumstances and present financial stringency, to tide over the situation. Among the points he made in his speech are the following :

1. The Eastern U.P. and Southern Bihar are in a precarious condition and unless one is prepared to give more and good sugarcane, there is a possibility of a number of mills going into liquidation.
2. Constant dispute and railway between the gur and sugar producers in Western U.P. is assuming proportions of national danger.
3. The demand for more and more prices of cane in Meerut, is a most unhealthy thing.

4. Want of adequate supply of cane throughout the season in Bihar. There is the obligation on the factories to take all cane that is supplied but there is no corresponding obligation on the part of a factory to demand all the cane grown in its reserved areas.

5. Khandsari producers are demanding an increase in the price from Rs. 29 per maund to Rs. 35—much higher than what had been fixed by the Government.

6. Gur as a cottage industry needs to be preserved without ruining the sugar factory industry on which depends a large number of our factories, large amounts of income to the States as well as to the Centre and on which depends the urban areas.

7. The U.P. factories are suffering under shortage of cane. Rationalisation is considered necessary as it is not worthwhile for these factories to continue. They will have apparently to shift to some other places. This step will enrich the Southern areas which are rich in the sugar content of the cane, but it is expected to affect the growers in the northern parts. Moreover, this shifting is a costly affair and removal of every factory will cost about Rs. 10 to 15 lakhs of rupees. Everybody would like to go into liquidation than spend so much money on shifting.

Measures to ensure adequate supply of Cane to Factories

8. To ensure adequate supply of cane throughout the season to factories in the U.P. and Bihar the following schemes were either tried, were found difficult to be implemented or tried and failed :—

   (a) *The Bombay System* : In which each industrial unit is given a farm sufficient to produce its own sugarcane. But this system cannot be tried in U.P. and Bihar as the pressure on land in these territories is already so heavy that it is not practical to hand over 2,000 acres to every unit.

   (b) *The Java System* : In which a small factory zone is set up round each factory and no jaggery and no bye-products are allowed to be produced in that area, so that all sugarcane grown in that area goes to the factory. The State Governments, the Minister remarked, have no courage to implement this system.

   (c) *Licensing of Kolhus* : In which no cane crushers or power crushers are allowed to operate in the factory area without a licence. The system was tried, but immediately after its introduction, it had to be given up (December, 1950).

   (d) *Control on Gur Prices* : The diversion of cane from sugar to gur was owing to high prices of gur which were not controlled. So this is being tried under the new policy announced in December 1950.

We would like to state at once that the approach of the Food Minister to the problem is correct. We have been pleading for a control on gur

prices to stop diversion of cane from sugar factories to gur production (*vide* preface to our *Annual* 1949).

Though he appreciated all that the Central Sugarcane Committee has been doing, the Hon'ble Minister was helpless in not reviving the research grant from the sugar excise duty @ Re. 0-4-0 per cwt., which was stopped, since 1949-50, owing to stringant finances of the Government. His "no money, no distribution" plea should not be interpreted as nothing doing at all in future, but nothing doing for the time being till financial conditions improve and stabilise. His move to co-ordinate the activities of all the commodity committees under the Indian Council of Agricultural Research is also significant.

Resolution passed by the 14th Meeting of the Indian Central Sugarcane Committee

The following resolution was moved by Dr. Punjabrao Deshmukh and passed by the I.C.S. Committee :—

"Inasmuch as the policy of Government with regard to sugar has a direct bearing on the cultivation of sugarcane, the prices paid to the agriculturists and the profits made by the manufacturers and in view of the fact that the Government should be duly informed of the manner and extent to which various interests are likely to be affected as a result of the pursuit of any particular policy ;

"And whereas the Indian Central Sugarcane Committee is charged with the duty of looking after and advancing the interests of not only the sugar industry but the cultivation and improvement of sugarcane ;

"This Committee is, therefore, strongly of opinion that the Government should associate and obtain the advice of its Finance and Executive Sub-Committee in all important questions connected with regard to production, marketing, control and improvement of sugarcane and sugarcane products."

Ex-Officio President of the Indian Central Sugarcane Committee 1950-51

The constitution of the Indian Central Sugarcane Committee was modified to provide that as from November 22, 1950, the Deputy Minister for Food and Agriculture shall be the *ex-officio* President of the Committee. The former practice was of nominating the Vice-Chairman of the Indian Council of Agricultural Research as the *ex-officio* President. The relevent resolution to the effect is as follows :

Copy of the Resolution No. F.7-29/50-Com., dated 22nd November 1950 issued by the Ministry of Agriculture, Govt. of India, New Delhi :

"In accordance with the terms of the Government of India in the last Department of Education, Health and Lands Resolution No. F.41-24/43-A, dated the 6th June 1944, the Vice-Chairman, Indian Council of Agricultural Research, was made the *ex-officio* President of

the Indian Central Sugarcane Committee. He is also *ex-officio* President of several other Commodity Committees and the volume of work in each of these committees has increased appreciably. In particular, he has now to devote considerable time to the jute and cotton development schemes which require frequent touring. The Government of India have, therefore, decided to relieve the Vice-Chairman, Indian Council of Agricultural Research, from the Presidentship of the Indian Central Sugarcane Committee. Clause (1) of paragraph 4 of the aforesaid Resolution has, accordingly, been modified to read as follows :

> "The Deputy Minister of Food and Agriculture, Government of India, shall be the *ex-officio* President of the Committee."

The Composition of the Indian Central Sugarcane Committee for the year 1950 was as follows :

Composition of the Indian Central Sugarcane Committee, 1950-51

(1) Deputy Minister of Food & Agriculture, Government of India, *Ex-officio* President; (2) Agricultural Commissioner with the Government of India, New Delhi; (3) The Director, Indian Agricultural Research Institute, New Delhi; (4) The Director, Indian Institute of Sugar Technology, Kanpur; (5) Agricultural Marketing Adviser to the Government of India, New Delhi; (6) Government Sugarcane Expert, P. O. Lawley Road, Coimbatore (S.I.); (7) The Director of Agriculture, Madras; (8) The Director of Agriculture (Extension), Bombay; (9) The Director of Agriculture, West Bengal, Calcutta; (10) The Director, Central Sugarcane Research Station, Shahjahanpur, U.P.; (11) The Director of Agriculture, East Punjab, Simla; (12) The Director of Agriculture, Mysore, Bangalore; (13) The Director of Agriculture, Bihar, Patna; (14) The Director of Agriculture, Hyderabad (Deccan); (15) The Cane Commissioner, Uttar Pradesh, Lucknow; (16) The Cane Commissioner, Bihar, Patna; (17) The Cane Commissioner, East Punjab, Jullundur; (18) Representative of the Ministry of Agriculture, Government of India, New Delhi; (19) Representative of the Ministry of Industries & Supplies, Government of India, New Delhi; (20) Plant Protection Adviser to the Government of India, New Delhi; (21) Shree R. L. Nopany, 178, Harrison Road, Calcutta; (22) Shree K. K. Birla, 8, Royal Exchange Place, Calcutta; (23) Shree Shankar Lall, 20, Curzon Road, New Delhi; (24) Shree D. D. Puri, C/o Messrs. Saraswati Sugar Mills, Abdullapur (Dist. Ambala); (25) Shree D. R. Narang, Basti Sugar Mills Ltd., Basti, U.P.; (26) Mr. A. Caws, C/o Kanpur Sugar Works Ltd., Marhowrah, Dist. Saran (Bihar); (27) Shree Lalchand Hirachand, Construction House, Ballard Estate, Fort, Bombay; (28) Shree A. G. Bandi Gowda, Chairman, Mysore Sugar Co., Ltd., Shree Jayachamaraja Wadiar Road, Bangalore City; (29) Shree B. P. Kedia, C/o Messrs. Ramnuggar Cane & Sugar Co., Ltd., 7, Wellesley Place, Calcutta; (30) Shree B. N. Gupta, Member, Representative Assembly, Mysore, Shree Jayachamarajendra Road, Bangalore City; (31) Shree Jagdish Saran Agrawal, General Secretary, United Provinces Khandsari & Rab Manufacturers' Association, Alamgiriganj, Bareilly,

U.P.; (32) Mr. Nasirur Rahman Kidwai, Baragaon Co-operative Marketing Union Ltd., Baragaon, Dist. Barabanki, U.P.; (33) Shree Kesho Gupta, M.L.A., Dist. Muzaffarnagar, U.P.; (34) Swami Shahjanand Saraswati, Bihta, Dist. Patna, Bihar; (35) Shree Kalika Prasad Roy of Dumraon Dist. Shahabad, Bihar; (36) Shree R. Devaraja Reddy, Pallalkuppam, P. O. Mailpatti, North Arcot Dist. (Madras); (37) Dr. R. Naganna Gowda, Hospet, Bellary Dist., Madras; (38) Shree W. D. Chitale, Managing Director, Chitale Agricultural Products, Ltd., Chitalenagar, Dist. Sholapur (Bombay Province); (39) Shree Balai Chand Shaa, Director, Nuddea Farms Ltd., P-19, Kambuliatollah, Calcutta; (40) Shree R. Venkatasubba Reddiar, Tindivanam, South Arcot Dist.; (41) Shree Mihir Lal Chattopadhyay of Tantipura, Birbhum (West Bengal); (42) Thakur Phool Singh, Saharanpur, U.P.; (43) Raja Raghavendra Pratap Singh, Raja of Mankapur, Dist. Gonda (U.P.); (44) Sardar Satwant Singh, C/o The Bhakhara Service Station, Nangal Township, Hoshiarpur (East Punjab); (45) Shree Dip Narayan Sinha of Purantand, P.O. Bhagwanpur, Dist. Muzaffarpur (Bihar); (46) Shree Sarangadhar Dass, Gopa Babu's House, Cuttack; (47) Shree Bimal Chandra Phukan, Madhuban, Panibal P.O., Dist. Sibsagar, Assam; (48) Dr. K. Subbaraju, M.B.B.S., Anakapalle (Vizagapattam Dist.); (49) Seth Maneklal Ujamshi, President, Bombay Sugar Merchants' Association, 104-114, Frere Road, Opp. Victoria Dock, Bombay; (50) Shree Madan Gopal Chowdhary, President, Kanpur Sugar Merchants' Association, Kanpur; (51) Shree Karam Chand Thapur, 5 Royal Exchange Place, Calcutta; (52) Sardar Jogindra Singh, P.O. Dhungaha, Dist. Baharaich, U.P.; (53) Shree Nandkishore Dass, Soro, P.O. Soro, Dist. Balasore (Orissa); (54) Dr. Punjabrao Shamrao Deshmukh, Amraoti, C.P.; (55) (To be filled); (56) Mr. Karamat Ali, Jorhat, Assam; (57) J. S. Bhal, Esqr., Sugar Technologist, Babhnan (O.T.R.), Dist. Gonda; (58) Dr. T. S. Venkatraman, 56, Thyagaraja Road, Thayagarayanagar, (Madras).

RESOLUTIONS OF THE INDIAN SUGAR MILLS ASSOCIATION

Resolutions of the 18th Annual General Meeting held on Saturday, the 13th January 1951 at New Delhi.

Maximisation of Production

"In view of the prevailing scarcity of sugar in the country and the difficulty in importing sugar, this Association welcomes the self-sufficiency plan of the Government under which it is proposed to make the country self-sufficient in respect of all the essential agricultural commodities including sugarcane so as to step up sugar output to 12 lakh tons in the next two years and extends its most willing and loyal co-operation to the Government in their above endeavour. This Association *is of the considered opinion that the target production of 12 lakh tons by the sugar industry is capable of realisation particularly as the industry has an annual rated capacity of about 15 lakh tons and has produced over 12*

lakh tons in the past. This Association, however, considers that the following steps are necessary for ensuring the target production of sugar :

1. Effective control over prices of gur and khandsari through control on their movement by rail, road and river or by introducing monopoly purchase system.
2. Remission of cess on rail-borne cane by the State Governments as an encouragement to factories to crush long distance cane and thereby increase production."

Cane Cess and Co-operative Societies' Commission

"This Association strongly endorses the recommendation made by the Indian Tariff Board, 1950, that cane cess collections should be utilised exclusively on development work to bring about rapid improvement in the yield and the sucrose content of cane. Further, that *the factories in the U.P. and Bihar should not be required to pay commission to the Cane Co-operative Societies separately and that they should be financed out of the cane cess proceeds.* This Association attaches great significance to the above recommendations of the Board as they have a vital bearing on the future development of the industry and it, therefore, urges upon the Government of India and the various State Governments concerned to implement the above recommendations of the Tariff Board without delay."

Sales Tax on Cane in Bihar

"This Association strongly *protests against the action of the Bihar Government in levying sales tax on cane crushed by the factories in the State, specially when sugar is already subject to State sales tax. Moreover factories in the State are also paying cane cess at the high rate of 3 annas per maund.* Such heavy taxation on the basic raw material of the industry is unknown to any other industry in this country or elsewhere and therefore, wholly unjustified. This Association, therefore, urges the Bihar Government to reconsider this matter and exempt cane consumed in sugar factories from the payment of the State sales tax."

Cane Development

"Although it has been realised by the interests concerned, viz. the factories, the growers, the State Governments and the Government of India that the increased production of sugar in the country as also any reduction in the cost of production are dependent, in the main, on the success of the development of sugarcane both as regards the yield and surcose content, this Association regrets that so far, no appreciable progress has been achieved in this direction, and in certain areas, the position has actually deteriorated. This Association considers that the following steps are essential for bringing about a rapid development of cane :

1. That the cane development work which has hitherto been in the hands of the Government or the cane development societies in the

U.P. and Bihar be entrusted to the factories in their respective zones as they are more vitally interested in the matter and at least one anna out of the cane cess be given to the factories for this purpose to begin with.

2. That the Government of India should *increase their contribution to the Sugar Research Fund to 4 annas per cwt. of sugar assessed to excise duty, from the present rate of 1 anna* as recommended by the Tariff Board so as to make available sufficient funds to the Indian Central Sugarcane Committee for carrying on research work and development. Further, the State Governments should also utilise the cane cess collections exclusively for cane development work.

3. That immediate steps should be taken to provide irrigation facilities in the cane growing areas as that is one of the important factors affecting the cane yields most; the cane yields in irrigated areas being double compared to the non-irrigated areas.

4. That factories should be provided with *necessary facilities for having their own farms of at least 250 acres for experimental purposes to grow cane with higher sucrose content and of early and late ripening varieties to prolong the season.*

5. That immediate steps should be taken to improve the roads in the vicinity of the sugar factories so as to ensure quick movement of cane from the purchasing centres to the mills.

6. That any restriction on the factories to grow food crops in their own farms should be withdrawn."

Government's Labour Policy

" While appreciating the well-meant efforts of the Government to improve the lots of workers, this Association desires to invite the attention of the Government of India as also of the various State Governments to the progressive increase in the wage bill of the sugar factories due to grant of various concessions to labour in the form of increased wages, bonuses, etc. While the Association fully appreciates the need for raising the standard of living of the workers, it feels that the concessions required to be granted by the factories must be related to the efficieny of the workers and industry's capacity to pay. The Association, however, regrets to note that while the Government have prevailed on the industry to grant numerous concessions to labour, they have done little to make the labour realise its responsibility in increasing the production and running the factories efficiently. Furthermore, by preventing the factories to retrench surplus labour with a view to rationalising their plants, Government are going against the unanimous decision of the Central Advisory Council of Industries which consists of representatives of labour, employers and Government that rationalisation and retrenchment should be permitted. Moreover, the Tariff Board, 1950, have themselves admitted in their report the existence of surplus labour in sugar factories. The present policy of the Government not to permit

retrenchment results in actually forcing the factories to employ surplus labour which is neither conducive to economic production nor industrial efficiency. On the contrary this results in a great national loss. This Association, therefore, urges upon the Government of India and the various Provincial Governments to reconsider their present policy in this behalf."

Difficulties of Sugar Industry in Bombay

" While every effort is being made by the Government of India to maximise production of sugar in the country, fresh and heavy burdens, as mentioned below, pressed by the Government of Bombay on the sugar industry in the State are likely not only to defeat this object but to discourage the industry from undertaking any expansion. The fresh impositions during recent years by the Bombay Government are :

1. Very heavy increases in the irrigation rates charged for the supply of water for the raising of sugarcane from February 1951 and further increases to take effect from 1952, adding to the cost of cultivation of sugarcane and subsequently to that of manufacture of sugar in the State.

2. A tax on the consumtion of electric power, which not only puts a fresh burden on progressive factories trying to reduce cost by rationalisation, but gives premium to inefficiency and the use of outmoded processes of manufacture. An enlightened Government should go all out to encourage efforts at improving efficiency and bringing out economy by giving concessions to those factories creating their own electric power and using it.

In view of the shortage of supply of sugar in the country and the need for avoiding increase in the price levels, this Association requests the Government of Bombay to :

1. Suspend the proposed increase in the irrigation rates for the present, and

2. Exempt the sugar factories from the electric tax, because they produce their own power from the waste materials, which if used in steam boilers for running machinery, the power is not taxed, but if utilised for generating electric power for the same purpose, the power so produced is taxed, which on the face of it is very anomalous and objectionable on principle, as it penalises the use of an improved process, designed also to effect a saving in coal for the country."

Remission of Cess on Cane grown in Factory Farms

" This Association views with concern that in spite of repeated representations made by the industry, the *State Governments concerned have been charging cess on cane grown by the factories in their own farms. Cane cess is primarily meant for cane development work and since the factories have to spend substantial amount on development of their farms, there is hardly any justification for charging cess on such cane.*

The Association therefore earnestly requests the Governments concerned to exempt the cane grown by the factories for their own use from the levy of cane cess."

FURTHER EXPANSION OF THE SUGAR INDUSTRY IN INDIA

With a view to meet the demand for sugar at the end of 5-year period in 1955-56, at 17 lakh tons, including 2 lakh tons for export, the Planning Commission in a meeting held in New Delhi on February 27, 1951 suggested further expansion of the sugar industry. The installed capacity of India's 158 factories was calculated at 15 lakh tons, on the basis of a crushing season of 120 days. To fill in the gap of 2 lakh tons, further expansion of the indutsry was considered vital by the Planning Commission.

It will be recalled that the Government of India had already permitted the installation of new units under their proposed plan as given below. The estimated cost of the new units needed for the execution of the plan is Rs. 30 crores.

Proposed Allocation of new Units under Government Plan

Name of State	No. of new units	Name of State	No. of new units
U.P. ...	4	Travancore ...	1
Bihar ...	3	Baroda ...	1
Bombay ...	6	Mysore ...	1
Madras ...	8	Cooch Behar ...	1
C.P. ...	1	Indore ...	1
Assam ...	2	Gwalior ...	1
Orissa ...	2	Jaipur ...	1
East Punjab ...	3	Cochin ...	1
Hyderabad ...	1		

It is pertinent to note in this connection the following among other points :

1. In 1947-48, the country could not consume even a production of 10.77 tons and the mills had to carry forward about 2 lakh tons of sugar to the season 1948-49.
2. Although low consumption in 1947-48 could be attributed to high prices of sugar at Rs. 35-7-0, yet drastic reduction in sugar prices during 1948-49 could not increase consumption to desired extent.
3. In 1947-48, the industry produced only 10.77 lakh tons although most of the factories were working only partially and the average duration of the factories in Bihar was only 75 days against the normal duration of 120 days and the factories in the Eastern U.P. had a season of only 80 days.

4. The total requirement of the country for the period ending 1950 was estimated by the Tariff Board at 12 lakh tons as against the rated capacity of the industry for 14 lakh tons.
5. Owing to the high prices of Indian sugar, there is no possibility of large-sized export to neighbouring countries.

Six new Factories for Bombay

During the year under review, on February 2, 1951, it was reported that the Development Department of the Government of Bombay had granted permission to start six new sugar factories in the State which when go into production are expected to increase production by 40,000 tons, the present production being 1.1 lakh tons. The total production in the State is thus expected to be 1.5 lakh tons as against the requirement of 1.75 lakh tons under the existing rationing commitments at 6 ounces per head per week in Bombay city and 12 ounces per head per month in the districts, though under normal conditions of free trade the consumption is stated to be 3 lakh tons.

The largest among the factories is to be started with a capital of Rs. 30 lakhs and will have a production capacity of 12,000 tons per year. One of the factories, namely, the Bagaitadar Sugar Producers' Co-operative Society Ltd. has already started functioning and has a capacity for 5,500 tons and is started with a capital of 15 lakhs at Loni in Ahmednagar. Four of the factories will be in the Deccan, one in Baroda and one in Dharwar. The present number of factories, which is 14, is thus likely to be increased to 20, if the anticipated expansion takes effect.

We are a little doubtful, however, whether actual proposals for installation of fresh units will materialise in the near future, owing to enormously higher cost of machinery, and slender foreign exchange, etc.

Extensions to Plants and shifting of Factories in U.P. and Bihar from 1947-48 to 1949-50

In 1947-48, the U.P. Government granted 11 licences and the Bihar Government 3 licences for carrying out extensions to the existing plants. In 1948-49, the U.P. Government granted 15 licences and the Bihar Government 2 licences for the same purposes. Uptil September 27, 1950, the Sugar Commission for U.P. and Bihar received 20 applications from U.P. factories for carrying out extensions to the existing plants and they were granted. One factory, viz. the Barhni Sugar factory (Basti Dist.), was allowed to shift to Mawana (Dist. Meerut) in the year 1949-50.

IMPORT DUTY ON SUGAR IN 1949-50 & 1950-51

According to a clause in the Finance Bill, 1950, the then existing protective duty on sugar which lapsed on 31st March 1950 was converted into a Revenue duty of the same amount from 1st April 1950. The formula for calculation of the import duty till 1st April 1950 was the rate at which excise duty (Rs. 3-12-0 per cwt.) was levied on Indian sugar

plus Rs. 6-12-0 per cent plus one-fifth of the total duty. This worked out to Rs. 12-9-7 1/5 per cwt. or Rs. 9-4-0 per maund. (*Vide* Table No. 14 in the Sugar Industry At A Glance.)

According to the Budget proposals for 1951-52, the total import duty on sugar was increased to Rs. 13-2-0 per cwt. or Rs. 9-10-3 per maund, the revenue surcharge on it being increased by 5 per cent more from 20 per cent to 25 per cent on the import duty with effect from 1st March 1951. This included the Revenue duty Rs. 6-12-0 per cwt. plus 25 per cent surcharge on it in addition to equivalent Excise duty Rs. 3-12-0 per cwt. plus 25 per cent surcharge on it.

QUALITY OF SUGAR MANUFACTURED IN 1948-49 AND 1949-50 SEASON

According to the information received from the Director of Indian Institute of Sugar Technology, Kanpur, the remarkable features of the quality of sugar produced in 1949-50 were:

1. The highest percentage of sugar produced during 1949-50 season as regards the colour was I.S.S. 28 and constituted about 49.13 per cent of the total production. As regards the grains size, the I.S.S. grade D constituted the highest percentage, it being 50.64 per cent of the total production, as against 48.49 per cent in the 1948-49 season.
2. As regards colour, the percentage of production to total production in 1949-50 was I.S.S. No. 29 : 9.19 per cent ; I.S.S. No. 28 : 49.13 per cent ; I.S.S. No. 27 : 37.74 per cent and I.S.S. No. 26 : 2.98 per cent as against the percentages of production in 1948-49 as, I.S.S. 29 : 1.97 per cent ; I.S.S. No. 28 : 26.41 per cent ; I.S.S. No. 27 : 60.86 per cent and I.S.S. No. 26 : 9.35 per cent.
3. As regards grain size, the production in 1949-50 to total production of sugar was I.S.S. D : 50.64 per cent ; I.S.S. E : 28.15 per cent ; I.S.S. C : 15.89 per cent ; and I.S.S. F : 3.02 per cent, as against the percentage of production in 1948-49 as I.S.S. D : 48.49 per cent ; I.S.S. E : 32.22 per cent ; I.S.S. C : 13.79 per cent and I.S.S. F : 2.23 per cent.
4. It will be thus seen that the production of I.S.S. 29 and I.S.S. 28 considerably increased in 1949-50 over the year 1948-49.
5. The production of I.S.S. 27 and I.S.S. 26 considerably decreased in 1949-50 over the previous year 1948-49.
6. The most prominent quality of the year 1949-50 was I.S.S. 28-D (instead of I.S.S. 27-D) which registered an increase in percentage over that of the previous season. And the percentage under "Up-graded" quality went up.
7. It thus became a matter of urgent necessity to make the best possible use of Indian sugar standards in an all-out effort for producing as few a number of grades as possible.

THE SUGAR INDUSTRY—
(1950 ANNUAL)

EDITOR : M. P. GANDHI.

(A review of Sugar Industry in the Indian Union during 1949-50 season and comments on the 1950-51 season)

CHAPTER I

INTRODUCTORY

Among the factors which influenced the working of sugar factories in the Indian Union to a considerable extent in 1949-50 were the following :

(*a*) The 1949-50 season was the first season following the re-control of sugar in September 1949.

(*b*) This was a season following a season of shortage and to maximise sugar production, the Government of India offered revenue concessions to sugar factories in the shape of exemption of full duty of excise (Rs. 3-12-0 per cwt.) for additional output over the production of 1948-49. The U.P. and the Bihar Governments also announced similar concessions in the shape of exemptions of full cane cess on additional output during 1949-50 over the production of 1948-49 season.

(*c*) In response to an appeal by the late Sardar Patel, Deputy Prime Minister, the industry started crushing much earlier notwithstanding the unripe condition of the cane crop with a view to increase production to the Government's target figure of 11 lakh tons as against 10.07 lakh tons achieved in 1948-49 season.

(*d*) As many as 102 factories started working before the middle of December 1949 as against 57 for the corresponding period in the preceding season.

(*e*) The ex-factory price of E-27 quality sugar was fixed at Rs. 28-8-0 per maund, while the gur and khandsari prices remained uncontrolled, and shot up. The gur prices averaged during the season from Rs. 22 per maund to Rs. 28 per maund and the khandsari prices moved between Rs. 50 to Rs. 60 per maund, in different

areas. The failure to control the prices of khandsari and gur offered incentive to gur and khandsari production and there was a large-scale diversion of cane from vacuum pan factories manufacturing sugar to open pan factories producing khandsari and gur. As a result, sugar factories worked in U.P. and Bihar to 75 per cent of their capacity and the average of the working days did not number 95 days even owing to shortage of supply of cane to factories.

(*f*) The cane price in U.P. for 1949-50 season was Re. 1-10-0 per maund of cane and Re. 1-10-9 in Bihar, for an ex-factory price of sugar at Rs. 28-8-0 per maund. This cane price worked out to Rs. 16-4-0 per maund of sugar or nearly 60 per cent of the price of sugar. This price being inclusive of Excise Duty (Rs. 2-12-1 per maund) and cane cess (Re. 1-14-0 per maund of sugar) left to the Indian manufacturer about Rs. 23-14-0 per maund.

(*g*) The price of Rs. 28-8-0 per maund of sugar was fixed without any consideration of the rise in the cost of production of sugar due to increase in the prices of raw materials like sulphur, lime, gunny bags and other stores, and larger burdens were imposed on the industry by payment of retaining allowances to workers under Government awards. As a result, a large number of the factories suffered losses.

Effect on Sugar Production, Sugar Industry and Economy

The impact of the above factors on sugar production, sugar industry and the country's economy were as follows :

1. *Sugar Production* : The total cane supply to the sugar mills in the Indian Union during 1949-50 amounted to 98.66 lakh tons against 100.96 lakh tons in the 1948-49 season, and the *mean* crushing period was also curtailed from 101 days in 1948-49 to 91 days in 1949-50. Sugar factories could not also work to their full capacity owing to shortage of cane. Although 139 factories worked during the season as against 136 in the preceding season, the production amounted to only 9.75 tons as compared with the target of 11 lakh tons and as against the actual production of 10.07 lakh tons in the preceding season. This was mainly due to the diversion of cane from sugar factories to gur and khandsari production, the prices of which being uncontrolled, were remunerative, as stated above. The overall production in 1949-50 fell by 3.4 per cent as compared to the production in 1948-49. In order to prevent break-down of rationing, import of sugar was deemed necessary, to fill in the gap of about 1 lakh tons. Consumption of sugar was thus curtailed, though consumption of gur and khandsari increased. The gur prices on an average were 50 per cent above their normal.

TABLE No. A

State-wise Production of Sugar in Indian Union in 1948-49 and 1949-50 season with Percentage Variations

Name of State	1949-50	1948-49	Percentage Increase (+) or decrease (—) in 1949-50 over 1948-49 season
	Tons	Tons (Approx.)	
U.P. ...	5,08,155	5,45,268	— 6.76%
Bihar ...	2,22,352	1,85,110	+20.365%
Chief Commissioners' States ...	5,090	5,479	— 7.00%
Rajpramukh States and Unions ...	55,418	88,509	—37.39%
W. Bengal ...	3,342	4,387	—23.75%
Bombay ...	1,11,225	1,13,002	— 1.5%
E. Punjab ...	9,249	9,674	— 4.31%
Orissa ...	1,916	3,418	—43.99%
Madras ...	58,610	51,126	+11.85%
Total ...	9,75,365*	10,05,969	— 3.4%

* The total production in 1949-50 according to the Director of Indian Institute of Sugar Technology was 975,400 tons.

The khandsari prices were nearly double their normal. On the basis of production of gur 27.14 lakhs in 1949-50 and its average price at Rs. 25 per maund, the total value of gur production works out to about Rs. 180 crores, and that of khandsari production estimated at 1.75 lakh tons, at an average of Rs. 55 per maund works out to about Rs. 25 crores. People had to spend nearly 13 crores more on khandsari and about Rs. 50 crores more on gur, as a result of the fall in production of sugar in the season and absence of control on the prices of gur and khandsari. Though sugar was available in reduced quantum in rationing shops during the season at about 7 annas per lb. yet the blackmarket price was as high as Re. 1 to Re. 1-8-0 per lb. Government was therefore compelled to consider import of sugar. In October 1949 foreign sugar was quoted at Rs. 17 c.i.f. per maund, and it went up as high as Rs. 27 c.i.f. in early 1950. The Korean hostilities further raised the rates of foreign sugar after June 1950. Government's delay in bargaining for a better price proved costly for India. Government had to pay about Rs. 4 5 crores for 60,050 tons out of which only 5,550 tons reached India in 1950 to supplement the rationing stocks.

Though there was a general drop in sugar production in the country, yet the factories in Bihar and Eastern U.P. actually produced more. In Bihar the improvement in the production was most marked and amounted to 20 per cent from 1.85 lakh tons in 1948-49 to 2.22 lakh tons in 1949-50.

The Eastern U.P. factories also reported an increase of about 14 per cent from 1.54 lakh tons in 1948-49 to 1.74 lakh tons during the season 1949-50. But this increase was more than offset by a heavy loss of production in the Western and Central U.P. and the overall production in the U.P. State showed a drop by about 7 per cent from 5.45 lakh tons to 5.08 lakh tons. In Madras, although gur competition was felt by factories, specially as the season advanced, the production showed on the whole a slight improvement from 51,126 tons in 1948-49 to 58,610 in 1949-50. In all the remaining areas, the production was lower than the previous season. The shrinkage in output of sugar in the Raj Pramukh States and Unions, as also in Orissa, has been of the order of 37 per cent and 44 per cent respectively, as compared with the previous season. It will be seen from Table No. A regarding the State-wise production, *of the total sugar production of 9.75 lakh tons, U.P. and Bihar, the main sugar producing States in the country, accounted for 7.30 lakh tons, i.e. about 75 per cent of the entire output.* The next highest production was due to factories in the Bombay State which produced about 1,11,226 tons, i.e. approximately 11 per cent of the total production. Madras which came next produced 58,611 tons which is about 6 per cent of the total output. Thus these States amongst themselves produced about 92 per cent of the entire output in the country during the season under review. The remaining States contributed only 8 per cent of the output.

To some extent, the production was affected by lower recovery of sugar achieved by the factories. Excepting the sugar mills in the Bombay Presidency which showed an improvement in the recovery from 11.02 per cent in 1948-49 to 11.87 per cent in 1949-50, the sugar recovery in all other parts of the country declined during the season 1949-50. The all-India recovery dropped from 9.97 per cent in 1948-49 to 9.88 per cent in 1949-50. In U.P. and Bihar the sugar recovery declined from 9.93 per cent and 10.33 per cent in 1948-1949 to 9.66 per cent and 9.93 per cent respectively in 1949-50.

2. *Sugar Industry Adversely Affected*: Not only was the sugar industry in the country not able to achieve higher production mainly owing to the high prices of gur and khandsari, which were uncontrolled throughout the season, resulting in large-scale diversion of cane from sugar production, but it suffered losses on account of the early start of the season under Government instruction resulting in a lower recovery. The industry was not on the whole benefited by the revenue concessions offered by the Government and the ex-factory price of Rs. 28-8-0 per maund for E-27 quality proved ultimately uneconomic. The ex-factory price of Rs. 28-8-0 per maund of sugar was fixed on the basis of 105 days' duration of the season and 10.0 per cent recovery in U.P. and 95 days' duration and recovery of 10.3 per cent in Bihar, while the actuals reached by U.P. was 90 days' duration and 9.66 per cent recovery and in Bihar 97 days' duration and recovery of 9.93 per cent. On the basis of the actuals, the cost of production of sugar worked out (according to estimates made by the Indian Sugar Mills' Association, given hereafter in Chapter 3, Table No. E) to Rs. 30-0-9 per maund of sugar in U.P. and

Rs. 29-7-0 per maund of sugar in Bihar as against the ex-factory price of Rs. 28-8-0 per maund. The loss in U.P. came to about Re. 1-9-0 per maund, and to about Re. 0-15-0 per maund of sugar in Bihar. The total loss to U.P. factories is estimated to have amounted to Rs. 21,573,450 on the basis of sugar production of 13,807,000 maunds and, to Rs. 5,636,250 in Bihar on the basis of production of 6,012,000 maunds of sugar. The total loss in U.P. and Bihar as a result of the variations in the estimated and actual recovery and duration is Rs. 27,219,700.

3. *Khandsari and Gur Producers Reaped Harvest*: As against the retail rationing rate of 7 annas per lb. of sugar, the gur rate was 8 annas per lb. and even more in 1950. The gur producers had a flourishing time in the 1949-50 season, and reaped a rich harvest of profit at the cost of consumers. So also the khandsari producers had a good time. Khandsari was selling from annas 12 to Re. 1 per lb. in retail in the open market and consumers had to spend nearly 13 crores more on khandsari, on the basis of production of 1.75 lakh tons in 1949-50.

Production of Cane and its Value (1949-50) Season

The total production of cane in India during 1949-50 season is estimated at 532 lakh tons valued at Rs. 250 crores at Rs. 47-8-0 per ton by the Deputy Minister for Agriculture *vide* his speech at the first Biennial Conference of Sugarcane Research Workers at Coimbatore, on January 12, 1951.

Total Value of Gur and Sugar in 1946-47 to 1949-50

The production of sugar in 1946-47, 1947-48, 1948-49 and 1949-50 in the Indian Union was, according to revised figures 9.01 lakh tons, 10.7 lakh tons, 10.07 lakh tons, and 9.75 lakh tons respectively, while the production of gur was 35.74 lakh tons, 34.92 lakh tons, 28.30 lakh tons and 27.14 lakh tons during the same period. The prevailing prices of sugar during the period were Rs. 22-11-0 in 1946-47, Rs. 35-7-0 in 1947-48, Rs. 28-8-0 in 1948-49 and Rs. 28-8-0 per maund in 1949-50, while the average prices of gur were Rs. 16 in 1946-47, Rs. 16 in 1947-48, Rs. 16 in 1948-49 and Rs. 25 in 1949-50 per maund. The total value of gur production works out to Rs. 161 crores in 1946-47, Rs. 146 crores in 1947-48, Rs. 127 crores in 1948-49 and Rs. 189 crores in 1949-50, while the total value of sugar production works out to Rs. 57 crores in 1946-47, Rs. 108 crores in 1947-48, Rs. 79 crores in 1948-49 and Rs. 73 crores in 1949-50. The total value of gur and sugar production accordingly works out to Rs. 218 crores in 1946-47, Rs. 254 crores in 1947-48, Rs. 206 crores in 1948-49 and Rs. 262 crores in 1949-50. (*Vide* Table 4-B in the Sugar Industry at a Glance).

CHAPTER 2

SUGAR, GUR AND KHANDSARI PRODUCTION IN 1947-48 TO 1949-50

Trends of Sugar and Gur Production in 1947-48 to 1949-50

During the past three seasons, since 1947-48, it will be seen from the table below, gur production in Uttar Pradesh recorded fluctuation, but the proportion of cane crop utilised for gur manufacture has not shown so much variation and has been during these years, of the order of 52 per cent to 54 per cent of the total cane crop of the State. In Bihar, however, the position with regard to gur production has been strikingly different from that in U.P. as the production evinced a spectacular fall in the two seasons 1948-49 and 1949-50, in comparison with the 1947-48 season. This was partly due to the diversion of more cane to vacuum pan factories leading to increased sugar production and leaving proportionately less sugarcane for gur manufacture, but the declining trend in the yield of cane crops in these years in Bihar, has been the main contributing factor for this low gur production as will be seen from the following table No. A.

TABLE No. A

*** Sugar and Gur Production in 1947-48 to 1949-50**

(Figures in Tons)

—	1947–48		1948–49		1949–50	
	Sugar	Gur	Sugar	Gur	Sugar	Gur
U.P. ...	633,500	1,503,000	543,500	1,322,000	508,700	1,404,000
Bihar ...	168,500	136,000	184,900	23,000	222,100	......
All-India ...	1,074,800	3,492,000	1,007,500	2,830,000	97[illegible],400	2,714,000

* Calculated net production of gur. *Vide* Director of Indian Institute of Sugar Technology, Kanpur, letter dated 6-11-1950.

According to the communication from the Director of the Indian Institute of Sugar Technology, the fixation of the cane price of Re. 1-10-0 for U.P. and Re. 1-10-9 for Bihar for the season 1949-50, does not seem to have affected the production of gur in these areas so much as the price of gur itself. This will be evident from the prevailing prices of gur given in Table No. B, below.

The gross production of cane (*vide* table No. 9 in the "Sugar Industry at Glance") during these years was 58,170,000 tons in 1947-48; 49,930,000 tons in 1948-49 and 49,040,000 in 1949-50. Compared to this,

the all-India figures of calculated net production of gur during these three years show that gur production has been more or less commensurate with the cane crop, the calculated net production being about 55 per cent to 60 per cent of the total cane crop in these years.

High Prices of Gur owing to want of Control—Main Cause of fall of Sugar Production in 1949-50

Gur prices being uncontrolled varied in U.P. from Rs. 17-3-10 per maund to Rs. 36-4-2 in the 1949-50 season when the sugar price was fixed at Rs. 28-8-0. This served to divert cane from vacuum pan factories manufacturing sugar to gur production which was more paying. While the situation in Bihar was a bit different, the prices of gur varied from Rs. 15-15-2 to Rs. 29-14-5 but on an average were somewhere about Rs. 22 per maund and there was not much incentive for diversion of cane to gur production and thus the sugar production in Bihar in 1949-50 season showed an increase over the previous years. The production of sugar in Bihar in 1949-50 was 222,100 tons as against 168,500 tons in 1947-48 and 185,000 tons in 1948-49.

TABLE No. B.

*** Average Gur Prices in U.P. and Bihar**

—	1947–48		1948–49		1949–50	
	U.P. Muzaffar-nagar	Bihar Bhagal-pur	U.P. Muzaffar-nagar	Bihar Bhagal-pur	U.P. Muzaffar-nagar	Bihar Bhagal-pur
December ...	15 9 0	17 2 0	11 9 10	14 0 0	17 3 10	...
February ...	9 7 6	11 10 0	11 14 9	10 8 0	22 14 5	16 3 0
May ...	13 6 0	12 0 0	15 0 10	11 8 0	29 5 8	21 10 6
June ...	14 14 0	13 0 0	16 0 3	12 0 0	31 7 0	23 1 9
July ...	15 6 5	13 4 0	17 14 5	12 8 0	34 6 1	27 5 9
August ...	15 8 0	13 2 8	19 15 4	14 0 0	36 4 2	27 6 8

* *Vide* letter from the Director of Indian Institute of Sugar Technology, dated 6-11-50.

The respective sugar prices during the years 1947-48, 1948-49 and 1949-50 were Rs. 35-7-0, Rs. 28-8-0 and Rs. 28-8-0 per maund. Gur price which is generally one-half the price of sugar, was either equal to or more than the price of sugar in the 1949-50 season. Especially in U.P. the price of gur had shot up to Rs. 36-4-2 per maund making gur manufacture a lucrative business. That was the cause of the diversion of cane from sugar manufacture to gur production. The high prices of gur, owing to want of control on them, was the main cause of the fall of sugar production in the 1949-50 season. This fact is again reflected in the percentages of the quantities of cane crushed in factories to total cane crop.

TABLE No. C

*** Percentage of Cane crushed in Factories to Total Crop**

—	1947-48	1948-49	1949-50
U.P. ...	22.98	22.14	19.12
Bihar ...	46.55	72.22	80.76
All-India ...	18.52	20.21	19.89

* *Vide* Director of the Indian Institute of Sugar Technology.

Khandsari Production up in 1949-50

It will be further observed from the table below that khandsari production, the prices of which were also not controlled shot up in the 1949-50 season to nearly double its production in 1947-48 in the U.P. The total production of khandsari in India in 1949-50 was 75 per cent more than the production in 1947-48. This was because of the high prices that khandsari was fetching especially in the U.P. during the period. The sugar production in the 1949-50 season was affected by the diversion of cane not only to gur but also to khandsari as will be evident from the following table No. D :—

TABLE No. D

*** Khandsari Production in 1947-48 to 1949-50 (Estimates)**

(Figures in Tons)

—	1947-48	1948-49	1949-50
U.P. ...	80,000	86,000	150,000
Bihar ...	5,000	5,000	1,000
Rest of India ...	20,000	22,000	24,000
All-India ...	105,000	113,000	175,000

* *Vide* letter from Director of Indian Institute of Sugar Technology, dated 6-11-1950.

A fair idea as to why khandsari production diverted cane from sugar manufacture can be had from the following average prices of gur, sugar and khandsari in various parts of the country in the second week of May 1950 (Table No. E).

TABLE No. E

*** Average Prices of Gur, Sugar and Khandsari in 1949-50**

—	Average Prices of Gur	Average Prices of Sugar	Average Prices of Khandsari
Jullandur ...	26 12 0	30 14 5	56 0 0
Amballa ...	25 14 0	31 5 9	60 0 0
Delhi ...	27 0 0	33 12 0	60 0 0
Agra ...	27 12 0	30 9 6	55 4 0
Hapur ...	26 6 0	33 2 0	55 4 0
Kanpur ...	26 4 0	31 8 0	60 0 0
Muzaffarnagar ...	28 13 0	30 1 0	56 0 0
Patna ...	22 0 0	30 9 6	55 0 0
Calcutta ...	28 0 0	31 9 5	......
Gauhati ...	......	36 8 0	......
Madras ...	25 4 0	33 6 0	......
Bombay ...	......	32 10 0	......
Amritsar ...	26 14 0	......	60 1 6

* *Vide* report of the "Leader" dated 19-5-50 on "Sugarcane crop acreage, etc.".

Production of Refined Sugar in India

Refined sugar is manufactured in India by three different processes, namely, (1) direct from cane from modern vacuum pan factories, (2) from cane by indigenous open pan factories, i.e. khandsari (through the intermediate process of Rab), and (3) from gur refined in modern refineries.

Khandsari Sugar Production

Khandsari sugar is produced mainly in the U.P., Bihar and Bombay, its annual production is a matter of conjecture and has been estimated during the past few years at about 1 lakh tons to 1.75 lakh tons, a large bulk of this being produced in the U.P. where 66 per cent of the total khandsari is produced. It was estimated by the authors of the "Report on the Marketing of Sugar in India and Burma" that *Khand* formed nearly 13 per cent of the total white sugar made in India. About 85 per cent of the quantity of *Khand* is directly prepared from cane juice and the rest by re-moulding gur. Its production, however, depends on the relative prices of cane, gur and factory sugar in any year. The quantity of khandsari sugar manufactured from cane has varied considerably in recent years. This will be evident from the following figures :

TABLE No. F.

Khandsari Production 1938-39 to 1949-50 and Production of Khandsari in Factories using Power

Year	Production Khandsari from Cane (Tons)			*Khand Production from factories using power (Tons)
	India	U.P.	Bihar	
1938–39 ...	100,000	...	...	...
1940–41 ...	200,000	...	...	...
1941–42 ...	214,000	...	...	27,900
1942–43 ...	195,900	...	...	15,950
1943–44 ...	137,300	...	...	21,400
1944–45 ...	114,700	...	...	25,750
1945–46 ...	117,000	78,000	7,200	17,000
1946–47 ...	105,000	80,000	5,000	21,154
1947–48 ...	105,000	80,000	5,000	19,059
1948–49 ...	113,000	86,000	5,000	19,757
1949–50 ...	175,000	150,000	1,000	21,613

* *Vide* letter No. Dy. M. 804-cx(z)/51 dated 27-3-1951 from the Secretary, Central Board of Revenue, Ministry of Finance, New Delhi.

The above estimates of khandsari production furnished by the Director, Imperial Institute of Sugar Technology till 1946-47 are over-estimates according to the Sugar Controller of the Government of India.

Khandsari Production in Factories using Power liable to Excise Duty

It is of interest to note that although the production of khandsari is very large, yet the production of khandsari in factories using power and paying excise duty at the rate of annas 8 per cwt. is very small. In this connection the figures given in the above table in column 5 as received from the Central Board of Revenue, New Delhi, are noteworthy. This explains why the amount of excise duty collected from khandsari is very low in spite of a large production of khandsari as all khandsari production is not liable to taxation. The total amount of excise duty collected from khandsari in 1934-35 and subsequent years is as follows:—

TABLE No. G.

Excise Duty collected from Khandsari 1934-45 to 1949-50

Year	Amount Rs.	Year	Amount Rs.	Year	Amount Rs.
1934–35 ...	77,000	1940–41 ...	2,86,000	1946–47 ...	2,39,000
1935–36 ...	60,000	1941–42 ...	4,43,000	1947–48 ...	2,00,000
1936–37 ...	47,000	1942–43 ...	1,57,000	1948–49 ...	2,14,000
1937–38 ...	51,000	1943–44 ...	5,09,000	1949–50 ...	2,19,000
1938–39 ...	59,000	1944–45 ...	9,90,000	1950–51 ...	2,00,000 (Est.)
1939–40 ...	1,46,000	1945–46 ...	2,25,000		

The present rate of the excise duty on khandsari sugar is annas 8 per cwt. only (i.e. Rs. 10 per ton).

If all the khandsari sugar pays duty, it would come to over Rs. 17 lakhs per year as against Rs. 2 lakhs collected now.

Gur Production in U.P. in 1949-50

The final report on the sugarcane crop in the U.P. for the year 1950-51 issued by the Director of Agriculture, U.P., placed the 1949-50 year crop acreage at 2,08,31,146 against 2,067,778 acres in 1948-49. Estimated yield of 1949-50 expressed in terms of gur was put at 26,13,905 tons against 24,16,612 tons in the previous year 1948-49. The estimated yield of gur in the seven top gur-producing districts of the U.P. State was as in Table No. H.

TABLE No. H.

Gur Production in seven Top Districts in U.P. (1948-49 and 1949-50)

—	1949–50 Tons	1948–49 Tons
Meerut	3,38,687	2,64,685
Muzaffarnagar	2,20,749	2,33,432
Saharangpur	1,54,440	1,41,419
Bulandshahr	1,14,060	1,14,321
Deoria	1,56,860	1,28,513
Bijnor	1,25,167	1,08,570
Moradabad	1,17,373	1,08,990
Total for 9 districts ...	12,27,326	10,99,930

It will be seen from the above table that there was a trend towards increase in the production of gur. This was as a result of the high prices for gur. The production of gur in seven districts in the U.P. increased by about 25 per cent as a result. Consequently, it affected the production of sugar in the State owing to the diversion of cane from sugar to gur production. (For details regarding gur production, its economies and its various qualities we invite a reference to our 1949 Annual).

Cane crushed in U.P. in 1949-50

Though in a good season about 19 crores of maunds of cane is crushed in the U.P. sugar factories, yet in 1949-50, only 14,36,56,000 maunds of cane was crushed. An important factor in the decrease in the cane crush was the diversion of cane to *kolhus* (cane crushers) producing gur and khandsari from sugar production. Though the price of sugar was pegged at Rs. 28-8-0 yet gur prices being uncontrolled were found to be as high as Rs. 60 per maund. The high prices of gur and khandsari

(even at Rs. 60 per maund) were responsible for an abnormal increase in the number of *kolhus* during the 1949-50 season. In 1949-50, the number of kolhus rose from 75,000 to 1 lakh in the U.P.

The move to license kolhus to enable sugar factories sufficient cane for a crush over a season of about 140 days which was contemplated in November 1950, was given up under the new sugar policy announced on December 1, 1950, as a result of the strenuous opposition of vested interests and the State of U.P.

Causes of Shortage of Duration in U.P.—Committee appointed by U.P. Government

In March 1951, the U.P. Government appointed the following committee to survey the sugar industry in U.P. with a view to find out the causes of short crushing season, poor production of cane, and to report on future planning and development of the sugar industry in U.P. :—

Mr. T. Swaminathan, Secretary to Government, Industries Department (Chairman); Mr. D. R. Narang, M.L.C., Basti Sugar Mills Co., Ltd. ; Mr. R. P. Nevatia, Hindusthan Sugar Mills Ltd., Gola-Gokarannath (Kheri); Mr. Hari Raj Swarup, Upper Doab Sugar Mills Ltd., Shamli (Muzaffarnagar); Mr. J. M. Bannerman, Balrampur Sugar Co., Ltd., Tulsipur (Gonda); Mr. A. Boer, Raza Sugar Co., Ltd. ; (Rampur); Mr. Har Sahai Gupta, M.L.C., Shankar Agricultural Farm. (Moradabad); Mr. Daulat Singh ; Mr. A. N. Jha, Secretary to Government, Agriculture Department or his representative ; Mr. A. D. Pant, Cane Commissioner U.P. and Mr. B. K. Mukerji Director, Sugarcane Research Station (Shahjehanpur); M. Zunnurain, Under-Secretary to Government, U.P. Industries Department will be the Secretary of the Committee.

The terms of reference of the Committee are as follows :

(i) To investigate and suggest means of removing the causes of the comparatively short cane crushing season in U.P. ;

(ii) To examine the working of the cane development organisation and to suggest ways and means of securing the more active co-operation and assistance of all the parties concerned ;

(iii) To examine and report whether and to what extent any incentive schemes for cane supply are feasible, e.g. payment according to sucrose content, bonuses for extra supplies during periods of best recovery and bonuses for supplies in excess of certain fixed quantities ;

(iv) To examine and make recommendations about the feasibility of utilising spare electric power from factories for irrigation purposes, particularly in the off-season ;

(v) To examine and make recommendations as regards the best means of utilising during the off-season both the plant and the workshop facilities available in sugar factories with a view to securing the employment of the available resources for more and varied production and thus reducing the costs of the sugar industry ; and

(vi) To generally examine the problems of the sugar industry with a view to making sugar production in the U.P. more competitive.

It may be recalled that the Minister for Agriculture, Mr. K. M. Munshi, suggested in Parliament in 1951 that cane areas should be reserved in the Western districts for factories in the Eastern Zone, as the suggestion to transfer factories from the Eastern Zone was unpracticable. The appointment of the Committee was a sequel to the suggestion of the Minister for Agriculture.

Sugar Production in 1950-51 Season

The production of factory sugar during the 1950-51 season till March 7, 1951, totalled 8,78,000 tons as against 7,70,000 tons during the corresponding period in 1949-50. It is expected to exceed 11 lakh tons as crushing was going on in several factories even in May.

Sugarcane Forecast for 1949-50 and 1950-51

The All-India Second Estimate of Sugarcane for 1950-51 put the year's area and yield at 3,922,000 acres and 5,102,000 tons of raw sugar-gur respectively (*vide* the Agriculture Ministry Press Note dated 25th January 1951). The current year's acreage records an increase of 6.9 per cent over that of 1949-50 adjusted corresponding estimate of 3,670,000 acres. The increase in the current year's acreage has chiefly occurred in U.P. and is attributed to the high prices of gur at sowing time. The same reason accounts for some increase in the current year's area under sugarcane in Bombay and Madras. *In 1948-49 the area under sugarcane, according to the summary of the latest all-India revised crop estimates, was 3,791,000 acres and the yield 4,993 tons (in terms of raw sugar gur), as against the total area under food crops about 189,58,000 acres in 1948-49* (*vide* Director of Economics and Statistics," Agricultural Situation in India, Vol. V, No. 8, November 1950). This acreage and yield in India can be compared to that in Pakistan of 747,000 acres for the year 1950-51 and 737,000 acres in 1949-50. (*Vide* " Indian Trade Journal ", Jan. 18, 1951).

TABLE No. I.

Statement II—Detailed Statement of All-India Second Estimate of Sugarcane Crop for 1950-51

Name of State	Area (Thousand Acres)		Yield (Thousand Tons of raw gur-sugar)	
	1950-51 II Estimate	1949-50 Adjusted II Estimate	1950-51 II Estimate	1949-50†
Assam ...	62	58	73	
Bihar (Excl. Merged territories) ...	478	424	331	
Bombay ...	185	151*	550	
Madhya Pradesh ...	47	54	59	
Madras ...	178	159	513	
Orissa ...	56	57	92	
Punjab ...	313	325	373	
Uttar Pradesh ...	2,279	2,100 (R)	2,689	
W. Bengal ...	52	57	74	
Hyderabad ...	66	50	98	
Madhya Bharat ...	44	59	43	
Mysore ...	37	43 (r)	63†	
Peps Union ...	52	59	58	
Rajasthan ...	35	35 (r)	24	
Bhopal ...	9	10	8	
Saurashtra ...	12	10	40	
Delhi ...	3	3	2	
Himachal Pradesh ...	2	3	1	
Kutch ...	1	1	1	
Tripura ...	5	5	6	
Vindhya Pradesh ...	5	6 (r)	3	
Other States‡ ...	1	1	1	
Total ...	3,922	3,670	5,102	N.A.

* Since complete data relating to the second estimate of 1949-50 is not available, Final Estimate figure for that year has been repeated.

† Figures of production have been included in the Second Estimate for the first time this year and corresponding estimate of yield for 1949-50 is not available. According to the Final Estimate of 1949-50, the yield was 4,904 thousand tons of raw sugar gur.

(R): Revised; (r): Adjusted; ‡: Includes Ajmer and Coorg.

Diversion of Existing Cane Area to Food Crops

As only about 25 per cent of the total production of cane in the country is crushed by the mills, it should not be difficult to bring under cultivation of food crops, if necessary, those cane areas which are situated far away from the mills. Though no increase in the existing cane area is essential, yet if at all a reduction in the existing cane area is to be made with a view to divert it to food crops, it should be made from the cane

areas other than those in the proximity of the mills so that the factories as in Eastern U.P. which are experiencing acute shortage of cane for a number of years past, will not be affected, and the problem of increased food production can yet be solved without affecting sugar production.

How Sugar Production can be increased to 12 lakh tons

While contemplating measures for maximising production to 12 lakh tons it is pertinent to note that Uttar Pradesh is by far the largest single producer of sugar and gur in India. Her production of sugar is more than 52 per cent of the country's total production of sugar and 40 per cent in gur. It would be interesting to note that of our country's cane production roughly 25 per cent goes for crushing in factories and 60 per cent goes for manufacture of gur and khandsari. The annual production of gur is roughly between 3 to 3½ times the production of sugar. It can thus be seen that if the cane consumption for gur manufacture is restricted to the extent of 8 per cent, we can get an increase of 25 per cent in our production of sugar, i.e. the production will reach the figure of 12 lakh tons, which will obviate practically the necessity of control and will make sugar available plentifully for all, and thus prevent dissatisfaction in the minds of a large section of the people. We feel, it is not a difficult feat for achievement.

New Policy can succeed if Gur and Khandsari prices are effectively enforced

Under the new policy announced in December 1950, the Government has done well to control the prices of gur, though much depends upon how the control on gur prices is exercised throughout the season. If the control on gur prices is properly enforced, there is every likelihood of adequate cane supply to the factories, and sugar production, as we have stated, may go up to over 11.15 lakh tons. The provision for free market sale of sugar produced in excess of 107 per cent of the previous year's production is expected to serve as an incentive to the factories to produce more sugar.

CHAPTER 3

A BRIEF SURVEY OF CANE, SUGAR AND GUR PRICES IN INDIA

The protective scheme as devised in the Sugar Industry (Protection) Act, 1932, was meant principally for the benefit of the cane growers in India. But it was found that the benefit of it was reaped largely by the factory owners and not so much by the cane growers. So in 1934, the Government of India reviewed the whole position and passed legislation enabling the Provincial Governments to enforce a minimum price for cane to be paid by the factory owners to the cane growers. In 1938, the Governments of U.P. and Bihar adopted an extensive system of

control over the sugar industry, enforced a cess on cane supplied to factories and decided to enforce minimum price regulations more rigidly than in the past. The prices of cane in subsequent years were thus found to be varying from province to province (*vide* Table 'A' below) till 1950-51 season when a general price of Re. 1-12-0 per maund was introduced.

TABLE No. A.

Cane prices per maund in different States in the Indian Union

Year	Bihar	U.P.	East Punjab	West Bengal	Madras	Mysore
1942-43 ..	0 10 0	0 10 0	...	...	...	...
1943-44 ...	0 12 0	0 12 0 (a)	0 14 6	1 0 0	...	0 10 6
1944-45 ...	0 14 0	0 14 0	...	...	0 13 0	0 12 0
1945-46 ...	0 15 0	0 14 0 (a)	1 0 0	1 2 0	0 13 0	0 14 0
1946-47 ...	1 4 0	1 4 0	1 6 0	1 6 0	1 3 10	1 3 3
1947-48 ...	2 0 0	2 0 0	2 0 0	2 0 0 (b)	1 15 8 (c)	1 10 3
1948-49 ...	1 13 0	1 10 0	...	—	1 8 8 to 1 11 9	1 10 3
1949-50 ...	1 10 0	1 10 0	...	1 12 0	1 8 8 to 1 11 9	1 7 7 (Approx.)
1950-51 ..	1 10 9* 1 12 0**	1 10 0* 1 12 0**	1 12 0	1 12 0	1 12 0	1 12 0

* *Vide* Gazette Extraordinary dated November 21, 1950. The price of Re. 1-10-9 for Bihar and Re. 1-10-0 for U.P. was in force till December 1, 1950.

** *Note* :—The minimum price of cane was raised by annas two from Re. 1-10-0 in U.P. and Re. 1-10-9 in Bihar to Re. 1-12-0 per maund *vide* Food Minister's statement in Parliament on December 1, 1950. The price fixed was applicable to all-India as powers were taken over by the Government of India under the Sugar & Gur Control Order, 1950, announced on 7th October 1950, from the State Governments to fix and enforce control on prices.

(*a*) The price was introduced in November 1943. Factories were directed to pay annas 2 in Defence Savings Bonds which were to be cashed one year after the war. The U.P. Government, however, reduced the price to annas 10 payable in full in cash.

(*b*) The price relates to purchases at factory. The price was Re. 1-14-0, if cane was bought at outstation.

(*c*) The price was linked with percentage recovery of sugar and net amount realised by factories during the season.

Early in November 1943, the Government announced an increase in the minimum price of cane in U.P. and Bihar from As. 10 a maund which was the price in 1942-43 season to As. 12 a maund of cane. At the same time the factories were advised not to pay the full price to the cane grower all at once. One-sixth of the price, i.e. As. 2 a maund, was to be paid in Defence Savings Bonds or Certificates which were to be cashed one year after the war was over. The Government expected that on the basis of the production of 9 lakh tons of sugar in U.P. and Bihar, nearly Rs. 3 crores would be withheld from circulation and be of assistance in their anti-inflationary measures. The Punjab Government found that it was not possible for the factories to get cane at Re. 0-12-0 and thus raised the price to Re. 0-14-6 per maund and the Bengal Government fixed Re. 1 per maund. At the fag end of 1943-44, the U.P.

Government announced a reduction of As. 2 in the price of cane, i.e. As. 10 per maund. The full amount was to be paid straight to the grower.

In October 1944, the price of cane was raised to As. 14 for the season 1944-45 as the price of sugar of the standard quality (D-24) was raised to Rs. 16-4-0 being increased by Re. 1-7-0. The U.P. and Bihar Governments in September 1945 announced the price of cane for the 1945-46 season. The price of cane purchased at outstations was As. 14 in U.P. and As. 14/6 for cane delivered at factory gate, while for Bihar, the cane price was As. 15 per maund for the 1945-46 season. In the 1946-47 season, the cane price in U.P. and Bihar was Re. 1-4-0 per standard maund of 82.2/7 lbs. avoirdupois exclusive of the cess at the rate of one anna per maund as the Government of India raised the prices of sugar of all grades by Rs. 4-4-0 per maund with effect from the 23rd October 1946 raising the price of D-24 sugar to Rs. 20-14-0, though for the Punjab and N.-W. Provinces the sugar price was fixed by Rs. 3-2-0 higher at Rs. 24 per maund.

On the 8th December 1947, the Government of India removed the control on sugar, and the cane price in U.P. and Bihar was fixed at a flat rate of Rs. 2 in place of Re. 1-4-0 per maund for the 1947-48 season as the sugar price was fixed with the approval of the Government at Rs. 35-7-0. The cane prices were not fixed statutorily but were agreed upon by the industry with the Governments of U.P. and Bihar and the agreement was kept. For the 1948-49 season, the cane price was reduced to Re. 1-10-0 for U.P. out of which Re. 1-8-0 were to be paid in cash and As. 2 were to be deducted by the factory under instruction from the Government and invested for saving in the name of the cane grower concerned. Withdrawals from this fund were not allowed for the first 12 months, while interest was allowed at 1½ per cent for the first year, 2 per cent for the second year and 2½ per cent for the third year. The minimum cane price fixed by the Bihar Government for 1948-49 season was Re. 1-13-0. In April 1949, deductions were allowed in the price of cane in South Bihar to two factories at the rate of As. 4 and As. 5 per maund, till the end of the season.

The cane cess for the 1948-49 season in U.P. was As. 3 and Bihar As. 2 per maund of cane. In March 1949, the Governments of U.P. and Bihar postponed recovery of the cane cess in order to enable the sugar factories to tide over their temporary difficulties.

In 1949-50, the price of cane in U.P. was fixed statutorily at Re. 1-10-0 per maund, and in Bihar at Re. 1-10-9 per maund. The cess was fixed at Re. 0-3-0 per maund both in the U.P. and Bihar as against Re. 0-2-0 in Bihar in 1948-49.

For 1950-51, the price of cane which was originally announced by the middle of October 1950, to be Re. 1-10-0 was increased on December 1, 1950, by annas two to Re. 1-12-0 in order to give relief to the cultivators, and consequently the sugar price was increased from Rs. 28-8-0

to Rs. 29-12-0. The sugar prices in certain areas in Bihar and U.P. were allowed an increase upto Rs. 33 per maund.

Comparative Rise in Prices of Sugar and Sugarcane since 1942

It will be interesting at this stage to review the rise in the prices of sugar and cane in comparison with the prices of other essential commodities. Table No. 38 in the "Sugar Industry at A Glance" in this book, shows the prices of wheat, rice, sugar, gur and sugarcane during the last 11 years, with August 1939 as the base year. A glance at the table will indicate that while the price of wheat went up from Rs. 5 per maund in September 1942 to Rs. 15-5-9 in July 1950 and of rice from Rs. 7-4-0 per maund to Rs. 26 per maund in July 1950, the price of sugar went up from Rs. 12-4-0 to Rs. 28-11-0 in July 1950. The prices of wheat and rice in July 1950 were Rs. 15-5-9 and Rs. 26 per maund respectively, while the price of sugar was Rs. 28-11-0 per maund. Similarly, the price of sugarcane also went up from 5 annas per maund in September 1942 to Re. 1-10-9 in Bihar and Re. 1-10-0 per maund in U.P. in July 1950. While the prices of cane have thus gone up by 500 per cent as compared with September 1941 prices, the price of sugar has gone up by about 300 per cent only during the same period.

Sugar Prices, Controls and Sugar Production

From Table No. B (on next page) the following conclusions can be deduced :—

(1) As about 10 maunds of cane is required to manufacture one maund of sugar, the cane price constituted nearly 66 per cent of the price of sugar in 1947-48 ; 70 per cent in 1946-47 ; 57 per cent in 1943 ; and 57 to 62.2 per cent in 1948-49 and 57 per cent in 1949-50. In 1950-51 it ranges from 55 to 60 per cent.*

(2) The production of sugar is adversely affected when the price of sugar remains controlled and that of gur uncontrolled as there is diversion of cane to gur from sugar manufacture and the prices of gur not being controlled shoot up. They were found to be twice as high as the controlled prices of sugar in 1949-50.

(3) Sugar price control with a control on the prices of gur proved a success in 1943-44 when production increased from 10.70 lakh tons of sugar to 12.16 lakh tons in 1943-44. On the other hand, when there was no control on gur prices and sugar remained controlled, sugar production went down as in the years 1941-42 (7.75 lakh tons as against 10.95 lakh tons in 1940-41), 1944-45, 1945-46, 1946-47 and 1949-50 when the production went down to 9.53 lakh tons, 9.44 lakh tons, 9.01 lakh tons and 9.75 lakh tons respectively.

* The actual price paid for cane, however, includes the transport charges, and co-operative society's commission. The percentage of the total cane price to sugar price is, however, greater and is given in the break-up of the sugar price in the "Sugar Industry at a Glance" section, and hereafter.

TABLE No. B

Analysis of Prices of Sugar, Sugarcane and Gur during the period of Control, De-control, Re-control and Rationalised De-control from 1932 to 1950

Year	Sugarcane prices per maund	Sugar prices per maund	Gur prices per maund (Average)	Production (in lakh tons) Gur	Sugar (Factory)	Remarks. Period of control, de-control, re-control, etc.
1939–40 ...	0 8 9	9 12 0	...	24.41	12.41	Period of de-control and over-production.
1940–41 ...	0 4 6	9 2 0	...	34.14	10.95	Restricted control over production
1941–42 ...	0 5 0	12 8 0	5 15 0	28.29	7.78	Imposition of control in April 1941 end. Rise in price of sugar owing to entry of Japan into War II. The blackmarket price rose to Rs. 60–100 and Gur prices un-controlled and diversion of cane to gur.
1942–43 ...	0 9 0	14 0 0	12 11 0	30.15	10.70	Period of control from 1941 to 1947.
1943–44 ...	0 12 0	15 0 0	9 8 6	34.99	12.16	Enforcement of gur control order.
1944–45 ...	0 14 0	16 4 0	9 9 2	36.33	9.53	Sugar factories had a nominal crush of 15 per cent. Gur control not effectively enforced.
1945–46 ...	0 14 6	16 10 0	13 2 0	35.78	9.44	Period of control.
1946–47 ..	1 4 6	20 14 0	16 0 0	35.74	9.01	Period of control.
1947–48 ...	2 0 0	35 7 0	16 0 0	34.92	10.74	Sugar decontrolled at Gandhiji's insistence since December 8, 1947 Consequent rise in production.
1948–49 ..	1 10 0 (U.P. 1 13 0 (Bihar)	28 8 0	16 0 0	28.30	10.00	Price control enforced and price of sugar was cut down to Rs. 28–8–0 from Rs. 37–7–0.
1949–50 ...	1 10 0	28 8 0	25 0 0 (upto Sept. 1950) 18 0 0	27.14	9.75	Price control. Sugar price fixed at Rs. 28–8–0 for E27 quality. Revenue concessions offered but to no effect.
1950–51 ...	1 12 0 (U.P.) 1 12 0 (Bihar)	28 8 0 29 12 0 (General) 30 8 0 (W.U.P.) 31 0 0 (N. Bihar) 32 0 0 (E.U.P.) 33 0 0 (S. Bihar)	19 0 0 to 23 0 0	...	11.15 (estimated)	Gur Control Order. Price fixed first at Rs. 18 then raised to Rs. 19 to 23. And sugar price fixed at Rs. 29–12–0 as per the Food Minister's statement.

(4) That the cane price has increased by 460 per cent and sugar price by 138 per cent during the 8 years since 1942-43 to 1950-51.

Cane Price Instrumental in the rise of Sugar Price

The following table will show how the increase in the price of cane, which constitutes today nearly 61 per cent of the price of sugar has been ultimately responsible for the rise in the price of sugar, there being no scope for reduction in the profit margin or the manufacturing charges except in the Government revenues or cane prices by improving the yield.

TABLE No. C

Percentages of Cane cost to total price of Sugar from 1944-45 to 1950-51

Year	TOTAL PRICE OF CANE				Sugar price	Percentage of cane cost to price of sugar (approx.)
	Price of cane per maund	Total price of cane required for a maund of sugar	Transport charges for cane required	Co-operative Society's commission		
1944-45 ...	0 14 0	8 14 10	0 2 0	0 1 8	16 4 0	56%
1945-46 ...	0 14 0	8 15 9	0 2 0	0 1 8	16 10 0	54%
1946-47 ...	1 4 0	12 8 0	0 2 0	0 2 3	20 14 0	61%
1947-48 ...	2 0 0	20 0 0	0 2 0	0 6 9	*35 7 0	56%
1948-49 ...	1 10 0	16 4 0	0 5 3	0 6 9	28 8 0	60%
1949-50 ...	1 10 0	16 4 0	0 5 3	0 6 9	28 8 0	60%
1950-51 ...	1 12 0	17 8 0	0 5 3	0 6 9	29 12 0	61%

* Decontrolled prices.

** Average for 1944-1951 is about 58.2 per cent.

It will be seen that the price of cane along with its transport and co-operative society's commission has increased from Rs. 9-1-8 in 1944-45 to Rs. 18-4-0 in 1950. Today it constitutes nearly 61 per cent of the price of sugar.

Break-up of Sugar Price for 1950-51 Season

The following table shows the break-up of the price of sugar as estimated by us for 1950-51 :—

TABLE No. D.

† **Break-up of the Sugar Price for 1950-51 season (Rs. 29-12-0 per maund of Sugar for E-27 Quality)**

Estimated No. of working days ... ... 105 (Estimated)
Estimated Recovery ... ... 10.0% (Estimated)

		Rs.	As.	Ps.	Percentage of total price of sugar (Approx.)
1.	Total price of cane required for the manufacture of one maund of sugar @ Re. 1-12-0 per maund* for 10 maunds or so ...	17	8	0	59.0
2.	Cess @ annas 3 per maund of cane for 10 maunds	1	14	0	6.3
3.	Transport charges for cane required ...	0	5	3	...
4.	Co-operative Societies' Commission ...	0	6	9	...
5.	Basic manufacturing expenses ...	1	15	0	...
6.	Additional manufacturing charges ...	3	9	10	...
7.	Excise duty ...	2	12	1**	9.4
8.	Extra Insurance ...	0	1	3	
9.	Award ...	0	3	0	
10.	Profit ...	0	14	9	3.1
		29	15	11	
11.	Reduction on account of molasses ...	0	1	6	
		29	14	5	
12.	Deduction on account of high transport charges, high extra interest on working capital, award, etc. as in 1948-49 price ...	0	6	0	
		29	8	5	
	Grade difference ...	0	4	0	
	29 12 5 or	29	12	0	

** Increased to this amount from 1st March 1950 from Rs. 2-3-3 before.
* Increased from Re 1-10-0 to Re. 1-12-0 per maund of cane from 1st December 1950.
† The above break-up is our conjectural estimate as no authoritative break-up for 1950-51 season is available The price for 1950-51 season is fixed on *ad hoc* basis. It is based on the break-up of 1949-50 for U.P. and the cane price of Re. 1-12-0 per maund fixed for 1950-51 season from December 1, 1950.

Cane Price Excessive and needs to be reduced

From the above table assuming that duration of the season will be 105 and recovery 10 per cent the following conclusions can be deduced :—

No. 10627 Date 20..10..70

(1) The cane price which is Rs. 17-8-0 constitutes nearly 59.5 per cent of the total basic price of sugar which is Rs. 29-12-0 or to nearly 55.5 per cent where the price of sugar is Re. 33 per md.

(2) The share of the cultivator in the price of sugar constitutes the cane price Rs. 17-8-0, transport charges Re. 0-5-3 and Co-operative Societies' commission Re. 0-6-9 which together come to Rs. 18-3-6 and constitute nearly 61.3 per cent of the total price of sugar.

(3) The Government share is constituted by the cess and excise duty and they together constitute nearly 16 per cent of the total price of sugar.

(4) The profit margin to the manufacturer which is Re. 0-14-9 per maund of sugar constitutes only about 3.1 per cent of the total price of sugar.

(5) Under the new policy, the only party who remains to benefit more than in the preceding year is the cultivator and not the manufacturer, who may have to suffer if the recovery percentage goes down below the estimated 10 per cent. Already he has suffered a loss owing to excess estimate for the year 1949-50, the recovery having gone down below the estimated 10 per cent to 9.9 and is estimated to go down to 9.8 or 9.6 in the 1950-51 season. The Sugar Control Board, U.P. and Bihar, has estimated that it will go down to 9.8 in 1950-51.

(6) In cases where the increase over Rs. 29-12-0 to Rs. 33-0-0 is given, the cost over cane is expected to be higher than Rs. 17-8-0 owing to low recovery from cane and other incidental charges. Even so, the manufacturer will be a little better off than otherwise, and this may afford an incentive for greater production.

Need to Implement Date-bound Variation Scheme

The cultivator of cane is always anxious to dispose of his cane early. This is because standing cane loses in weight from about February onwards, the fodder available from it gets dried up, and late-standing crops are an agricultural inconvenience to him. In addition, his payment is otherwise delayed.

The early supplier is thus at a marked advantage as against the mid-season or late supplier. One possible solution of this difficulty seems, therefore, to be to evolve a system of payment for cane at lower rate in early season and at higher rates in the mid and mid-late seasons, the variations being brought by a gradual date-bound increase.

The factories should also be agreeable to this ascending scale of prices because within certain limits, it would be in line with the improvement in the recovery rate of sugar from cane.

The periods that suit the factory and the cultivator for the operation of the ascending scale of prices are not wholly concurrent; over a period of 8 weeks in the eastern tracts and 12 weeks in the central and mid-western tracts of the U.P. between December and March the scale can operate with advantage to both parties.

Taking into account the losses suffered by the cultivator and the factory respectively, a price variation of one pice every five days over 8 weeks in the eastern tracts and one pice every seven days over 12 weeks in the central and mid-western tracts is recommended for consideration.

In the mid-late season, the price should be as far as possible maintained high in order to benefit the cultivator, and then brought down to not less than the flat rate till the close of the specified season. The interests of the cultivator and factory are divergent in this part of the season.

The prices should be so fixed in the variable scales that the total price paid for cane over a given (minimum) season of, say, 110 or 120 days should be the same as if there were a flat rate. The prices in the late season beyond the specified season should be slightly lower than the flat rate, so that with lower prices in the lower recovery periods at either end of the crushing season, and the consequent greater uniformity in the factory's margin of profit through the season, the factory may be encouraged to extend its crushing season.

A scheme on the above lines proposed by Mr. R. R. Pange was considered to be sound in principle by the Tariff Board, 1950. We feel that a scheme of a varying payment of the price of cane depending on the period of supplies, e.g. early, middle and late, should be examined by the industry and implemented at an early date in view of the benefits such a scheme might bring to the sugarcane industry in the country, namely :

(1) The adoption of a scheme on the above lines might encourage an extension of the crushing season, and increase of production and lowering of costs and provide longer seasons of employment to labour and of supply to the cultivator;

(2) It will also make possible the payment of a premium on early and late varieties, and thus help to increase recovery by getting early ripening varieties in the beginning of the crushing season and late-ripening varieties towards the end of the season;

(3) It will improve the reliability of survey and bonding statistics in the zones; and

(4) It will help the cultivator too, as he will be able to get higher payment for suitable quality of cane delivered at the appropriate period when the sucrose contents in the cane are high.

Cane Price must be in parity with Sugar Price and Sugar Recovery

The principle of fixation of cane prices in parity with gur and sugar prices as well as in parity with sugar recovery percentage had been com-

pletely lost sight of by the Government while fixing the cane prices in the past. Also there was no uniformity in the prices of cane in U.P. and Bihar thus causing considerable difficulty to factories on the border States to secure cane at the minimum fixed price. This was the position particularly when the Government of India announced on November 25, 1950, that the cane price for Bihar would be Re. 1-10-9 when the price for U.P. was already fixed on October 18, 1950, to be Re. 1-10-0 and that of sugar for both the States to be Rs. 28-8-0. By their announcement on December 1, 1950, fixing the uniform cane price of Re. 1-12-0 for cane the Government certainly removed the handicaps encountered by the border States factories. But still the announcement lacks the understanding of the vital principle in fixation of sugar prices, as it is not fixed in parity with sugar recovery or sugar prices.

No doubt there was some apparent justification in the season 1949-50 when the Bihar Government fixed the minimum price of cane at Re. 1-10-9 in that State for a sugar price of Rs. 28-8-0 as the prices were based on an estimated duration of 105 days and sugar recovery 10 per cent for the season 1949-50 though they were falsified by facts when it was found that the actual duration of the 1949-50 season was only 100 days and sugar recovery 9.9 per cent. Naturally the factories suffered heavy losses, though the cultivator as well as the Government reaped the benefits of excessive cane price. But with regard to the season 1950-51, even this justification was not there when the cane prices were fixed on October 28, 1950 or November 25, 1950, or December 10, 1950. According to the Sugar Control Board for U.P. and Bihar, the sugar recovery in Bihar during this 1950-51 season is expected to drop down to 9.8%. This drop is expected in sugar recovery in view of the increase of CO-453 variety which yields lower recovery thus requiring more than 10 maunds of cane to manufacture one maund of sugar. Uneven rains, draught in the beginning followed by excessive rains and again draught and floods at the end are also expected to adversely affect sugar recovery. The sugar industry according to its estimate feels that the factories are expected to reach only a figure of 9.6 per cent in the recovery.

The cost of production of sugar in Bihar and U.P. is expected to go up in view of the awards of Mr. Justice Bindbasni Prasad in U.P. and Mr. Justice Sinha in Bihar adding considerably to wage bills. It was reasonably expected of the Government that they should not have fixed the price of sugar for 1950-51 season without any regard to the cost of production of sugar. This expectation of the industry was fulfilled by the Government while fixing the prices as announced in the new policy on December 1, 1950. But still if the decreasing sugar recovery were to be taken into account, there was greater justification in either not granting increase in the price of cane or in increasing the basic price of sugar to a level of about Rs. 29-12-0 to make up the loss owing to lower recovery. The price of Rs. 29-12-0 is in fact no increase in the interest of the manufacturer for it just accommodates the increase given in the price of cane. The increase upto Rs. 30-8-0, Rs. 31-0-0, Rs. 32-0-0 and Rs. 33-0-0 for certain parts in U.P. and Bihar are also no increases in favour of the

manufacturer as in the interest of the cultivator for owing to lower quality of cane yielding less recovery, more than 10 maunds of cane is expected to be required for the manufacture of one maund of sugar.

TABLE No. E.

Statement showing the Estimated and Actual duration and recovery in U.P. and Bihar and the loss sustained by Factories owing to variations in Estimates * in 1949-50

—	Government Basis for		Costs on Actuals		Additional costs owing to low recovery and shortage of duration in States	
	Bihar	U.P.	Bihar	U.P.	Bihar	U.P.
	Duration: 95 days Recovery: 10.3%	Duration: 105 days Recovery: 10%	Duration: 97 days Recovery: 9.93%	Duration: 90 days Recovery: 9.66%		
Price of cane @ 1 10 0 ...	16 3 5	16 4 0	16 14 2	16 11 10	0 10 9	0 7 10
Cess @ 0 3 0 p.m. ...	1 13 0	1 14 0	1 14 4	1 14 0	0 1 4	0 0 10
Transport ...	0 5 3	0 5 3	0 5 0	0 5 3		
Co-operative S. Commission ...	0 1 9	0 6 9	0 1 9	0 6 9		
Basic Manufacturing expenses ...	2 0 10	1 15 0	2 1 8	2 4 7	0 10 0	0 5 7
Additional M.E. ...	3 12 1	3 9 10	3 14 6	4 1 0	0 2 0	0 7 2
Excise duty ...	2 12 1	2 12 1	2 12 1	2 12 1		
Extra Insurance ...	0 1 3	0 1 3	0 1 3	0 1 3		
Awards ...	0 3 0	0 3 0	0 3 0	0 3 0		
Profits ...	0 15 0	0 14 0	1 0 2	1 1 8	0 0 5	0 2 11
	28 4 4		29 4 2	29 14 3	0 15 10	1 8 4
Deductions for Molasses ...	0 1 6		0 1 6	0 1 6		
	28 2 10		29 2 8	29 12 9		
Additional for grade difference between D-24 & E-27 ...	0 4 0		0 4 0	0 4 0		
	28 6 10		29 6 8	30 0 9		
Price Fixed ...	28 8 0		28 8 0	28 8 0		
Loss Per maund of sugar ...	0 14 0 *or* 0 15 0	1 8 9 *or* 1 9 0				

—	In U.P.	In Bihar	Total in U.P. & Bihar
Total production of sugar in 1949–50 season in maunds ...	13,807,000	6,012,000	Mds. 19,819,000
Total loss Rs. ..	21,573,450	5,636,250	Rs. 27,219,700

* *Vide* figures supplied by Indian Sugar Mills' Association.

Losses Suffered in U.P. and Bihar owing to Variations in Recovery and duration of season

The actual loss that U.P. and Bihar suffered as a result of lower recovery and shortage of duration of the season was of the order of Rs. 21,573,450 and Rs. 5,636,250. This was because of the variations in the Government estimated duration of the season 1949-50 and recovery which were estimated for U.P. as 105 days and 10% while the actual duration of the season was only 90 days and recovery only 9.66 per cent. The duration and recovery for Bihar for 1949-50 was estimated by the Government as 95 days and 10.3 per cent while the actual duration and recovery were 97 days but recovery only 9.93 per cent. The loss per maund of sugar sustained by U.P. factories was approximately Re. 1-8-9 and Bihar factories was approximately Re. 0-15-0. The total loss for U.P. for 13,807,000 maunds of sugar production was about Rs. 21,573,450 and for Bihar for 6,012,000 maunds of sugar production during the same season 1949-50 was Rs. 5,636,250. The total loss for U.P. and Bihar owing to excess estimate of recovery and duration of the season was about Rs. 26 lakhs during the season 1949-50. The point will be clear from Table No. E above.

CHAPTER 4

COST OF PRODUCTION OF SUGAR IN INDIA

A Review of the Cost of Production of Sugar during the last 18 years

A review of the price of sugar during the last 18 years at once shows that the price of sugar in India is not in parity with the price of sugar in other countries of the world. In recent years it has increased by about 400 per cent since 1932-33 and the need for its reduction is imperative. It is undoubtedly high today (if not extraordinarily high as compared with prices of other commodities) in comparison with the prices of sugar available in other parts of the world such as Brazil, Cuba, Formosa, etc., and needs to be decreased to be brought in parity with world sugar prices.

A study of the cost of production of sugar during the last 18 years as given in Tables Nos. A and B on pages 27-28 shows that during the last 18 years the cane cost has gone up by 500 per cent when the sugar price has gone up by 400 per cent. The cane cost on an average constituted 58 per cent of the total average price of sugar, Government taxation 14 per cent, Salaries and wages 7 per cent, Manufacturing charges 15 per cent, and net profit 6 per cent during the last 18 years (1932-33 to 1949-50).

An analysis of the balance sheets of 60 factories during the three years ending 1946-47 showed that the cost of cane worked out to 60 per cent, Government taxation 16 per cent, Salaries and Wages 10 per cent, Manufacturing charges 10 per cent, and net profit 4 per cent.

In 1949-50, the cane cost constituted nearly 59 per cent of the ex-factory price of sugar (for E-27 quality which was considered standard), Government taxation 16 per cent, Salaries and Wages 14 per cent, Manufacturing charges 8 per cent, and net profit 3 per cent. In the 1950-51 season, the cane cost constitutes nearly 61 per cent, Government Taxation 16 per cent, Manufacturing charges 7 per cent, Salaries and Wages 13 per cent and net profit 3 per cent of the ex-factory price of sugar which was fixed at Rs. 29-12-0 with cane price increased from Re. 1-10-0 to Re. 1-12-0.

The position will be amply clear from Tables Nos. A and B below :—

TABLE NO. B

Percentage of Various Items to Total Price of Sugar

	Average for 1932-33 to 1949-50	Average for 1944-45 to 1946-47	1949-50 (Approx.)	1950-51 (Approx.)
Cane Cost (per maund of sugar including Transport, Co-ops. commission)	58%	60%	60%	61%
Govt. Taxation including cane cess, Excise Duty, etc.	14%	16%	16%	16%
Manufacturing Charges ...	15%	10%	8%	7% (approx.)
Salaries and Wages (including bonus, etc.) ...	7%	10%	13%	13%
Net Profit ...	6%	4%	3%	3%

Cane Cost Excessive and needs to be reduced

From Table No. A, it will be evident that the average cost of cane per maund was Rs. 3-7-0 along with transport charges and co-operative society's commission in 1932-33 to 1937-38 and constituted nearly 44.36 per cent of the price of sugar which was Rs. 7-12-0. The cane cost increased to Rs. 5-5-2 during 1938-39 to 1942-43 and constituted nearly 50.67 per cent of the price of sugar which was Rs. 11-0-0. It further went up to Rs. 8-1-2 during 1943-44 to 1945-46 and constituted nearly 54.37 per cent of the price of average price of sugar which was Rs. 16. It jumped to Rs. 16-12-4 in 1946-47 to 1948-49 and constituted nearly 59.64 per cent of the average price of sugar which was Rs. 28-2-0 per maund. In 1949-50 it increased to Rs. 17 along with its transport charges and co-operative society's commission and constituted nearly 60 per cent of the price of sugar which was Rs. 28-8-0. In 1950-51 it increased to Rs. 18-4-0 and constituted nearly 61 per cent of the ex-factory price of sugar which is Rs. 29-12-0.

TABLE No. A

Production Costs, Profit, Share of the Governments and Cultivator in the Cost of Production of Sugar for Groups of years (1932-1951)

Seasons	1932–33 to 1937–38		1938–39 to 1942–43		1943–44 to 1945–46		1946–47 to 1948–49		1949–50		1950–51†	
No. of years ...	6		5		3		3		1		1	
Total sugar produced (Tons) ...	42,73,000		48,37,000		31,13,000		30,06,000		9,75,400		11,15,000 (Est.)	
Average per season (Tons) ...	7,12,000		9,67,000		10,38,000		10,02,000		......		......	
Average Recovery per cent ...	9.18		9.70		10.09		9.88		9.89		......	
Average duration of season—days ...	......		......		......		......		91		......	
—	Rs. a. p.	Percentage to total price of sugar	Rs. a. p.	Percentage to total price of sugar	Rs. a. p.	Percentage to total price of sugar	Rs. a. p.	Percentage to total price of sugar	Rs. a. p.	Percentage to total price of sugar	Rs. a. p.	Percentage to total price of sugar
Price of cane ...	3 4 0		5 5 6		8 7 6		16 4 0		16 4 0		17 8 0	
Transport of cane ..	0 2 0	44.36 (for Price of cane, Transport of cane and Co-operative Society's Commission)	0 2 0	50.67 (for Price of cane, Transport of cane and Co-operative Society's Commission)	0 2 0	54.37 (for Price of cane, Transport of cane and Co-operative Society's Commission)	0 3 1	59.64 (for Price of cane, Transport of cane and Co-operative Society's Commission)	0 5 3	60.00 (for Price of cane, Transport of cane and Co-operative Society's Commission)	0 5 3	61.0 (for Price of cane, Transport of cane and Co-operative Society's Commission)
Co-operative Society's Commission ...	0 1 0*		0 1 8		0 1 8		0 5 3		0 6 9		0 6 9	
Prov. Government Cess ...	..	14.24 (for Prov. Government Cess and Excise duty)	0 8 0	24.22 (for Prov. Government Cess and Excise duty)	0 10 1	20.75 (for Prov. Government Cess and Excise duty)	1 7 3	16.89 (for Prov. Government Cess and Excise duty)	1 14 0	16.0 (for Prov. Government Cess and Excise duty)	1 14 0	16.0 (for Prov. Government Cess and Excise duty)
Excise duty ..	0 14 6		1 14 6		2 3 3		2 9 6		2 12 1		2 12 1	
Salaries & Wages ...	0 10 0	8.06	0 10 0	5.64	0 15 6	6.04	2 11 9	9.74	3 12 10	13.0	3 12 10	13.0
Manufacturing charges (less Molasses realisation)	1 8 0	20.97	1 5 0	13.46	2 2 3	15.46	2 7 4	10.53	1 13 6	...	...	...
Net Profit (Est. by Govt.)	0 15 0	12.40	0 10 7	6.01	0 8 10	3.85	0 14 6	3.20	0 14 9	3.0	0 14 9	3.0
Approximate Income taxes	0 3 6	**	0 4 3	**	0 7 9	**	0 11 3	**	...	...	...	...
Packing bags ...	0 2 0	‡	0 2 6	‡	0 5 2	‡	0 8 1	‡	...	...	...	...
Total Price Average ...	7 12 0		11 0 0		16 0 0		28 2 0		28 8 0		29 12 0	

* During these years cane commission was paid to other suppliers as co-operatives were not established.
** Percentage included in Government taxation in heads Excise duty, Cane cess, etc.
‡ Percentage included in manufacturing cost.
† Figures are provisional and estimated by us. No authoritative break-up is available as the prices for 1950-51 are fixed on *ad*

Nearly the same conclusion will be arrived at by the following Table No. C which gives cost of production of sugar in individual years:

TABLE NO. C

Production Costs, Profits and Taxes per maund of Sugar 1944-45 to 1948-49

Season	1944-45	1945-46	1946-47	1947-48	1948-49
	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
Price of cane ...	8 14 10	8 15 9	12 8 0	20 0 0	16 4 0
Transport of cane ...	0 2 0	0 2 0	0 2 0	0 2 0	0 5 3
Co-ops. Commission ...	0 1 8	0 1 8	0 2 3	0 6 9	0 6 9
Govt. Cess ...	0 10 2	0 10 0	0 10 0	1 14 0	1 14 0
Excise Duty ...	2 3 3	2 3 3	3 5 9	2 3 3	2 12 0 (From March)
Salaries & Wages ...	0 14 0	1 0 6	1 10 10	3 12 10†	2 11 3
Manufacturing Charges (less molasses) ...	2 3 1	2 1 7	2 0 5	3 4 2	2 1 9
Net Profit (Est. Govt.)	0 7 0	0 11 4	1 1 3	1 1 9	0 8 3
Approximate Average income taxes ..	0 6 9	0 6 9	0 13 6	0 14 0	0 6 6
Total Price of Sugar ...	16 4 0	16 10 0	22 11 0**	35 7 0	28 8 0*

* Including Re. 1 added for pooling previous year's carry-over of higher cost.

† Including average bonus paid under Govt. orders.

** The price was fixed at Rs. 20-14-0 per maund, but is taken as Rs. 22-11-0 per maund in 1946-47 in view of additional Re. 1-13-0 per maund realised by the industry on about one-eighth of the U.P. and Bihar production carried over.

It is necessary to point out that the prices of cane and sugar have been controlled by the Government right from 1942 and distribution of sugar was canalised through Government agencies till December 1947, when sugar was decontrolled. In February 1948, the price of sugar was again fixed by the Government at Rs. 28-8-0 per maund for D-24 quality, after a very detailed investigation into the cost of manufacture. The rise in the price of cane was not very high till 1946-47 season, but in 1947-48 the price was suddenly increased from Re. 1-4-0 to Rs. 2-0-0 per maund. Consequently the price of sugar was also increased from its previous level of Rs. 20-14-0 per maund as fixed in 1946-47 to Rs. 35-7-0 per maund in December 1947. It will be seen that the main reason for the high price of sugar lies in the price of cane. As pointed out above, the price of cane had risen slowly from Re. 0-5-6 per maund in 1939-40 to Re. 1-4-0, in 1946-47 to Rs. 2-0-0 per maund, in 1947-48 to Re. 1-10-0 for U.P. and Re. 1-13-0 for Bihar in 1948-49, to Re. 1-10-0 in 1949-50 and Re. 1-12-0 per maund in 1950-51.

In a speech delivered by the President of the Tariff Board in opening the conference of sugar interests for consideration of the question of continuance of protection to the sugar industry, held in Bombay on the 28th November 1949, it was pointed out that the cost of cane in terms of total cost of sugar rose from 36 per cent in the years 1935-36 to 1938-39,

to 46.2 per cent in 1942-43 and in 1949-50 it was 66.5 per cent. It was also pointed out that this increase did not take into account the excise duty levied by the Central Government and the cane cess levied by the U.P. and Bihar Governments.

In regard to the fixation of cane price from year to year, it will be seen that there is no accepted method or scientific basis for the determination of cane price, which in practice, was settled in the past by mutual negotiations and bargaining, for reasons which were not economic nor directly related to the cost of cultivation of cane or the cost of alternative crops. It will be seen that the rigidity of the cost structure of the sugar industry is, indeed, the principal cause of the high price of sugar, as also its disparity with the price of sugar in some foreign countries. This position cannot be rectified unless the U.P. and Bihar Governments which are States concerned in the fixation of the price of sugarcane and sugar, bring down the cane prices appreciably. The Tariff Board of 1949 suggested in their report that the U.P. and Bihar Governments should endeavour to reduce the price of cane by 6 annas per maund in two instalments with a view to bring it down from Re. 1-10-0 to Re. 1-4-0 per maund over two years. The Tariff Board (1950), endorsing the suggestion of the previous Board, also suggested that the price of cane should be brought down to Re. 1-0-0 per maund in the next five years and that of sugar to Rs. 18-0-0 or Rs. 19-0-0 per maund. If this were done, the cost of sugar could have been brought down by Rs. 3-10-0 to Rs. 24-14-0 per maund in two years and by Rs. 7-0-0 to Rs. 22-4-0 by 1955. But a contrary phenomenon was witnessed in the 1950-51 season when the cane price was increased by annas 2 per maund and consequently the price of sugar was raised to Rs. 29-12-0 or even Rs. 33 per maund in some parts of the country as against the suggestion of the Tariff Board (1950) to fix the price of E-27 quality at Rs. 24-12-0 in the 1950-51 season. This step is decidedly contrary to the policy of the Government of India announced in 1949 suggesting a reduction of at least 10 per cent in the prices of foodstuffs and other essential articles. The explanation, however, lies in the desire of the Government to fix the price of sugarcane in parity with the price of other crops. Perhaps, there may have been political considerations particularly for the U.P. and Bihar Governments, which may have been responsible for an increase in prices.

Sugar Price Rise not extraordinarily high

The rise in the price of sugar in recent years is, however, not extraordinarily high as compared with that of other commodities like wheat, rice, and sugarcane. It will be observed from Table No. 38 in the section "Sugar Industry at a Glance" that while the prices of essential commodities have gone up by 6 to 8 times as compared with 1939, the increase in the price of sugar has been only about 300 per cent in 1950 since 1939. Besides it will be seen that in comparison with the rise in prices of other agricultural production, the increase in the price of sugar is the lowest. The following figures will show the increase in prices in respect of certain commodities in May 1949 and July 1950 over August 1939 :—

TABLE NO. D

Rise in Prices of Commodities in comparison to Sugar

Commodity	May 1949	Commodity	July 1950
Oilseeds ...	588%	Wheat ...	600%
Vegetable oils ...	595%	Rice ...	850%
Oil cakes ...	397%	Sugarcane ...	371%
Sugar ...	299%	Gur ...	420%

But, here it is necessary to point out that the increase in the price of sugar will show a material fall if we took into consideration the additional taxation in the form of excise duty and cess during recent years. Sugar is one of the most highly taxed food articles in the country at the present time, the total taxation in respect of excise duty working out to 9.5 per cent, to say nothing of the increase of 6.5 per cent on account of the provincial cess, and also sales tax on sugar, which works out to about 4½ annas per maund in U.P. and about 7 annas per maund of sugar in Bihar (at the rate of 2 pies per rupee in U.P. and 3 pies per rupee in Bihar).

Burden of State Cess on Consumer

Another element which goes to increase the cost of sugar production is the cess collected by State Governments of U.P. and Bihar at the rate of annas 3 per maund of cane, which works out to an approximate increase of Re. 1-14-0 per maund of sugar. We have dealt with this question in detail in the section "Cane Cess and Cane Development". If the cess is abolished, the price of sugar can be brought down by that much amount.

Burden of Government Taxation and Cane Cost

Apart from the price of cane and State cess on cane, which constitute a very large proportion of the price of sugar, the Co-operative Society's commission of Re. 0-0-9 per maund and transport charges of cane have also to be reckoned with, and in addition to this, there is the burden of the excise duty which works out to Re. 2-12-0 per maund of sugar. The share of the Government, Central and States, in the price of sugar is constituted by the Provincial cess at Re. 1-14-0 per maund of sugar and Rs. 2-12-0 excise duty and other taxes such as sales tax and income-tax. From Table No. B it will be evident that the average percentage of the Government taxation was 14 per cent of the price of sugar in 1932-33 to 1949-50, 16 per cent in 1944-45 to 1946-47. 16 per cent in 1949-50 and works out to about 16 per cent in 1950-51. We have pointed out in an earlier section on "Protection to the Sugar Industry" what exactly the shares of the Government and the cultivator come to in the income from sugar industry during the last 18 years. The share of

Government in the sugar production during the period valued at Rs. 600 crores, comes to about Rs. 115 crores out of which cane cess is Rs. 25 crores and Excise duty Rs. 90 crores, the share of the cultivator in the income being Rs. 315 crores towards the price of cane, Rs. 5 crores as transport charges, and Rs. 5 crores towards Co-operative Societies' commission. The total share of the cultivator and the Government works out to Rs. 430 crores out of Rs. 600 crores worth of production in 18 years. Nearly 54 per cent of the total value can be said to have been disbursed towards cane cultivation and 18 per cent towards Government taxation.

It will be seen that the Excise duty per cwt. has increased from Re. 1-5-0 in 1934 to Rs. 2-0-0 in 1937 and to Rs. 3-12-0 in 1940-50, an increase of over 200 per cent and the cane cess has increased from Re. 0-5-0 per maund of sugar in 1937-38, to annas 0-10-0 in 1943-44, to Re. 1-14-0 in 1949-50. Both of these today constitute nearly 16 per cent of the price of sugar and serve to keep the price of sugar, along with other factors, very high, and its burden is constantly felt by the consumer, particularly when he realises that the price of sugar in some other countries of the world like Brazil, Cuba and Soviet Russia is reported to be lower. It is significant, however, to note here that in spite of such heavy taxation on Indian sugar it was not as high as the c.i.f. price of Indonesian sugar which was quoted by the Government of India in January 1950 to be over Rs. 20 exclusive of duty of Rs. 9-4-0, per maund with the addition of which it would have been still higher than the price of indigenous sugar.

Manufacturing Charges not capable of Much Reduction

A close study of the Tables Nos. A, B and C will show that manufacturing expenses during recent years are lower than in earlier years of pre-war days, in spite of the high cost of chemicals, fuels, etc. and are definitely not capable of further reduction. The manufacturing charges were on an average 14 per cent of the price of sugar during the period 1932-33 to 1949-50, 10 per cent of the price of sugar during the period of 1944-45 to 1946-47, and today they constitute approximately about 7 per cent of the total price of sugar, as against 8 per cent in 1949-50. The manufacturing expenses cannot be reduced appreciably any further unless there is a suitable development of the qualities of cane, e.g. early ripening varieties, ratoon, etc. in proper proportions. Unless this is made possible, the crushing period cannot be extended and it must be appreciated that shorter the period of crushing, the higher are the manufacturing expenses. This will be evident from the following scale prepared by Mr. R. C. Srivastava, the then Director of the Indian Institute of Sugar Technology, in 1939-40, and which, with modifications, still forms the basis of the calculation of the price of sugar by the Government of India. The scale of the manufacturing charges varies with the crushing period in the manner given in the scale (Table No. E).

TABLE No. E

Duration of the Season	Manufacturing Charges per maund of sugar, taking the sugar recovery at 10%
	Rs. as. ps.
60 days	3 3 7
80 "	2 8 7
100 "	2 0 4
120 "	1 11 7
140 "	1 8 1

Apart from this, the manufacturing expenses also vary invariably with the sugar recovery as can be seen from the figures given below:—(Table No. F.)

TABLE No. F

Sugar Recovery Per Cent	Manufacturing Expenses per maund of sugar, keeping the duration of the season fixed at 100 days.
	Rs. as. ps.
9.5 per cent	2 1 10
9.7 per cent	2 1 0
9.8 per cent	1 14 4
10.0 per cent	1 13 8
10.5 per cent	1 12 3

Besides, allowance is to be made for the increase in prices of mill stores, such as coal, firewood, lime, gunnies, etc. Although the Government have allowed an increase of 100 per cent in these, it will be found insufficient when the increases in the prices of stores, etc. are considered.

Reduction of Profit not possible

It will be observed from Tables Nos. A, B and C that the net profit allowed by the Government while computing the price of sugar is very small and it is impossible to effect any reduction therein. In fact, a larger profit would have to be allowed to enable the manufacturer to lay by suitable reserves, to provide for adequate depreciation and renewal of machinery, which is available at highly inflated prices and to give fair return to investors in the industry. From Table No. B it will be evident that the net profit allowed to the manufacturer was on an average 6 per cent in 1932-33 to 1949-50, 4 per cent in 1944-45 to 1946-47, 3 per cent in 1949-50, and is estimated to be also 3 per cent in 1950-51.

The profit margin throughout the period of control of the industry was maintained on the pre-war level at 10 per cent on the block, as was

recommended by the Tariff Board of 1937. The Tariff Board, 1937, had also observed that out of 10 per cent on the block, the industry would be able to retain 8%, leaving 2% towards taxation. For the purpose of the calculation of the price, the gross block for an average sugar factory was taken at Rs. 18 lakhs. Therefore the net profit allowed to a sugar factory was Rs. 1,80,000. Even today when the price of sugar is over 300 per cent of the price in 1937, no increase is allowed in the profit margin which, it will be seen from the previous tables, remains at about 3 per cent of the total cost, and whatever the benefit from the increased price of sugar, has mainly gone to the cane-growers and the workers.

The following figures indicate roughly the percentage increases in different items of cost over the pre-war level, as compared with 1949-50 :—

TABLE NO. G

Percentage Increase in Different Items of Cost over Pre-war Level

Items of Cost	Percentage over pre-war level
1. Cane ...	400%
2. Salaries and Wages ...	475%
3. Manufacturing Charges ...	100%
4. Cane Cess ...	200%
5. Excise Duty ...	25%
6. Profit Margin ...	nil
7. Co-operative Society's Commission ...	350%

Increased Direct Taxation absorbs much from Net Profit

To point out these figures is not to argue that the rate of increase in the margin of profit should be the same as the rate of increase in the price of sugar, for it would be held to be inequitable, but it is certainly essential that due allowance should be made for the alterations in conditions. Firstly, for instance, it should be realised that as a result of increase in the rate of Government taxation, as much as 50 per cent of the 10 per cent of the gross profit allowed is taken away by such taxation and only 5 per cent of the block as against 8 per cent, as was recommended by the Tariff Board, is left for reserves and dividends to the shareholders. In addition to this, an analysis of the results of the working factories during the last 3-4 years before 1949-50 will show that it has not been possible for them to realise even that margin of profit which was allowed to them in accordance with the controlled rates fixed by the Government owing to the wide disparity between the estimates regarding duration of the season and recovery of sugar made by the Government at the commencement of the season, and the actual as indicated by the results. Any fall in the duration of the season or the recovery

does add to the cost of production and reduces the margin of profit. We have clarified this point in this Annual by showing the actual loss suffered by some of the sugar factories as a result of the variation in the estimates made by the Government and the actuals achieved by factories particularly in U.P. and Bihar. The additional cost as a result of shortage of duration of the season and fall in recovery below the estimate was annas 15 per maund in Bihar and Re. 1-8-4 per maund in U.P. in the 1949-50 season. The total loss sustained as a result in the 1949-50 season was Rs. 21,575,450 in U.P. and Rs. 5,636,250 in Bihar. In an analysis made by the Indian Sugar Mills' Association, the following information comes to light:

TABLE NO. H

Government Estimates and Actuals differ considerably from 1944-45 to 1949-50

Year	U.P. Estimate of Sugar Control Board for Fixing Sugar Price		Actuals Achieved by factories in U.P.		Bihar Estimate of Sugar Control Board for Fixing Sugar Price		Actual Achieved by factories in Bihar	
	Duration	Recovery	Duration	Recovery	Duration	Recovery	Duration	Recovery
1944-45 ...	115	9.8	98	10.2	85	10.6	78	10.6
1945-46 ...	110	10.0	95	10.0	100	10.6	79	10.5
1946-47 ...	100	10.0	96	10.0	90	10.5	70	10.0
1948-49 ...	105	10.0	98†	9.93†	...	...	84†	10.34†
1949-50 ...	105	10.0	90	9.66	95	10.3	97	9.93

† *Vide* our 1949 Annual, page XIV, Sugar Industry at a Glance.

Reduction in Profits as a result of the Variations in Estimates and Actuals

The Indian Sugar Mills' Association has computed that during the period 1944-45 to 1946-47, the total loss that this disparity has brought to the sugar industry in U.P. and Bihar has been of the order of Rs. 33,900,000. This fact, it is stated by the Association, is further borne out from the figures of actual profits collected from the balance sheets of various sugar mills. The following figures of the gross profits, taxes and net profits earned by over 60 sugar factories in U.P. and Bihar during 1944-45, 1945-46 and 1946-47 would afford a very instructive study in this connection:—

TABLE No. I

—	1944–45	1945–46	1946–47
No. of Factories analysed...	67	64	57
Gross Profit ...	1,21,14,000	1,08,63,000	1,14,27,009
Taxes Paid ...	72,22,000	59,93,000	68,69,000
Net Profits ...	48,92,000	49,30,000	45,58,000
PER FACTORY			
Gross Profit ...	1,81,000	1,69,000	2,00,000
Taxes Paid ...	1,08,000	92,000	1,20,000
Net Profit ...	73,000	77,000	80,000

From this above Table No. I, which was prepared for the Indian Sugar Syndicate by a reliable firm of Auditors, it will be seen that the average profits of the U.P. and Bihar factories in the 3 seasons amounted to an average of Rs. 77,000 only per season per factory, i.e. about 4 per cent of the block (of Rs. 18 lakhs) as against 8 per cent, as was intended to be allowed by the Tariff Board of 1937.

Profit negligible on basis of Present Cost of Establishment and Replacement, etc.

Besides, it ought to be remembered also that the average cost of a factory, which was computed by the Tariff Board at about Rs. 18 lakhs in the pre-war years would be today not less than Rs. 60 to 70 lakhs. It is stated that the actual cost of a factory of 800 tons capacity established by Messrs. Parry and Company in Madras in 1949, was Rs. 65 lakhs. Although it may be admitted that it may not be necessary for any factory to completely replace its plants in one year, provision will have to be made for replacements which fall due from year to year. Such a provision is necessary in order to prevent the plant from getting obsolete and for keeping it modern and up-to-date. On the basis of gross block of Rs. 30 lakhs, which is the minimum to be computed as the value of a new unit, for the purposes of allowing depreciation, etc. the profit would work out to much less than 3 per cent so far allowed under the basis of the fixation of the price by the Government.

Sugar Industry not profiteering

Apart from the necessity of allowing a suitable margin of profit to the factories in order to enable them to give a fair return to the investors and to attract further capital for the purpose of further development of the industry, the data given in the paragraph above would certainly be useful in dispelling the wrong impression which seems to have been created in the minds of many that the sugar industry has been profiteering in recent years, due largely to the constant increase in the price of sugar, which doubtless throws a larger burden on the pockets of the consumer.

A glance at the above tables would, however, show that the high prices of sugar are due principally to the high prices of cane (in common with other agricultural commodities) the profits of which go to the cultivator and Government due to the high rates of taxation in the form of excise duty, cane cess, sales tax on sugar, etc. A part of the high price can also be explained by the constantly increasing wage bill. The present high price of sugar, as will appear from an unbiased study of the situation, *is not due to the high profits made by the industry, nor indeed due to the inefficiency of the industry.*

As a matter of fact, a study of these tables will show that *the sugar industry has not been receiving even that margin of profit as was considered reasonable by the Tariff Board,* and the consequence is that a large number of factories have not been able to build up adequate reserves for repairs and renewals of the plant and machinery, particularly at the existing high prices, and this in turn militates against the possibility of factories obtaining the latest machinery and devices for improving the technical efficiency of the plants. The Tariff Boards of 1937, 1946 and 1947 have also admitted that they were satisfied with the actual technical efficiency achieved by the sugar factories in India. Table 39 and table 41 in the " Sugar Industry at a Glance " in this Annual give a comparative study of the technical efficiency of sugar factories in India as compared to other countries of the world. A glance at these tables will show that the overall recovery (which denotes the technical efficiency of a factory) which was 83.35 per cent in 1934 rose to 85.04 per cent in 1940-41 and was 84.96 per cent in 1947-48. These figures, it will be seen, are better than Natal with 82.61 per cent in 1941, 84.09 per cent in 1947 and 83.85 per cent in 1948. They compare favourably with the figures for Mauritius with 83.51 per cent in 1946 and 83.42 per cent in 1947, though they are slightly lower than that of Java, Cuba or Hawaii. Considering the numerous difficulties that the factories in India have to face, the achievement of the sugar industry cannot but be characterised as remarkable, though, it is admitted, that sugar industry in India has not still achieved that state of efficiency which will enable her to face foreign competition.

We give below, as usual, a statement showing the dividends paid by a few sugar companies from 1939 to 1949 :

TABLE No. J

Capital and Net Block of a few Sugar Companies, and Dividends since 1938

Name of Sugar Factory	Paid-up Capital with Debentures*	Net Block	Dividends %											
			1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949
	Rs.	Rs.												
Balarampur ...	28,00,000	18,76,032	2½	Nil	Nil	Nil	Nil	5	5	Nil	2½	Nil	5	Nil
*Basti ...	15,00,000	15,44,558	15	12	5	10	20	30	20	20	15	12	12½	...
Belsund ...	19,49,025	10,04,184	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	...	...
Belapur ...	37,59,800	36,07,486	14	20	20	14	12	18	18	16	...	24	...	...
Bharat ...	5,00,000	4,91,832	5	5	Nil	5	7½	12½	10	10	7½	7½	7½	...
Buland ...	18,40,057	18,40,057	11¼	11¼	12½	17½	22½	22½	25	20	Nil	20	20	7
*Carew ...	65,00,000	56,14,075	10	Nil	Nil	Nil	Nil	12½	10	15	12½	Nil	6¼	5
Cawnpore ...	25,00,000	27,66,414	5	2½	2½	15	15	25	15	15	15	15	15	15
Champarun ...	18,00,000	10,36,480	5	7½	2½	15	15	30	20	20	15	12½	13½	13¾
Durbhanga ...	26,00,000	13,92,788	..	...	...	12½	10	25	10	Nil	5	Nil	6	...
*Deoria ...	8,99,452	10,33,906	5	5	Nil	5	7½	...	10	Nil	Nil	...	..	...
*Mysore ...	21,79,280	30,50,785	15	15	20	20	20	20	20	20	20	20	20	20
*Nawabganj ...	19,46,500	19,83,186	11	10	5	12	...	20	15	15	15	15	...	...
New Savan ...	11,00,000	6,45,722	Nil	Nil	Nil	10	7½	12½	15	7½	Nil	5	5	5
*New India ...	14,12,700	12,68,372	Nil	Nil	Nil	Nil	Nil	...	...	...	...	...	...	...
Punjab ...	12,00,000	8,28,175	15	6	Nil	10	10	10	15	15	...	12	6	...
Purtabpore ...	11,00,000	16,02,376	Nil	Nil	Nil	5	Nil	12½	7½	7½	7½	Nil	6	Nil
*Ramnugger ...	31,00,000	28,99,038	Nil	Nil	Nil	Nil	...	...	...	10	10	10	9	...
Raza ...	20,00,000	16,33,590	12½	12½	12½	17½	22½	22½	25	25	Nil	10	25	6
*Ryam ...	8,00,000	4,88,418	Nil	Nil	Nil	Nil	5	20	15	10	10	15	6¼	6¼
*Samastipur ...	11,29,000	6,52,697	Nil	Nil	Nil	Nil	5	10	7½	3¾	3¾	5	6	5$\frac{15}{16}$
*Shree Sitaram	10,95,462	13,54,858	10	...	5	7½	12½	15	..	10	7½	5	6¼	...
*Sitalpur ...	13,01,310	12,05,659	2½	2½	Nil	Nil	5	6¼	6¼	2½	Nil	..	...	...
*South Bihar ...	13,00,000	16,94,750	25	10	9	15	10	...	...	...	...	Nil	...	...
*Upper Ganges	35,00,900	25,25,321	7½	10	Nil	17½	15	15	...	...	...	20	17½	17½

* Only those marked with asterisks include Debentures.

Comparative Technical Efficieny satisfactory

In regard to technical efficiency, it must be observed that fairly satisfactory technical efficiency has been achieved by the Indian sugar factories and the Tariff Boards of 1937, 1946, 1947 and 1950 were also satisfied with it. In Tables Nos. 39 and 41 in the "Sugar Industry at a Glance" we have given figures of the Technical Efficiency of sugar factories in India as compared with that in other countries of the world. It will be seen that we are not worse off as compared with other countries. It does

not appear, therefore, that there is much room for economy in the price of sugar on this score. In any case, even if there is some possibility of economy, the overall effect of the same on the reduction in the price of sugar will be negligible. This is not to suggest that the manufacturer should not direct his attention to an improvement in the technical efficiency and a further reduction, if possible, in the cost of production. The recovery also showed, it was admitted by the Tariff Board of 1950, a remarkable improvement since the grant of protection to the industry. The figures of recovery rose to above 10 per cent during the period from 1942-43 to 1945-46, while during recent years it has declined below 10 per cent in U.P. and Bihar especially, though it is more than 10 per cent in Bombay and Madras (*vide* Table No. 30 and Table No. 7 in the " Sugar Industry at a Glance "). The lower recovery in recent years is partly due to low sucrose content of the cane in recent years. We invite particular reference to the following items in Table No. 41 in the " Sugar Industry at a Glance " :—

1. Sucrose per cent bagasse,
2. Moisture per cent bagasse,
3. Reduced extraction (based on 12.5 per cent fibre),
4. Sucrose per cent filter cake,
5. Weight of filter cane per cent cane,
6. Purity final molasses,
7. Recovery,
8. Losses, and
9. Average polarisation.

It would be easy to see that if India gets adequate supply of good cane, it should be possible for her to lower the cost of production of sugar substantially. It should also be borne in mind that efficiency varies in seasons of under-production and over-production. In seasons of under-production, cane supply is short and irregular for the factories to work efficiently, and in the seasons of over-production, the factories have to start early and continue crushing till late in the season thus dealing with both unripe and over-ripe canes. In many cases they have to crush larger quantities of cane per day than their plants are designed for and as a consequence the efficiency drops.

Apart from this an increase in the efficiency would partly depend also on the replacement and renewal of machinery, better cane supply, better and quicker transport, etc.

TABLE No. K

*** Statement showing the Technical Efficiency of Sugar Factories in India as compared to that in other countries**

	India			Natal			Hawaii			Queensland			Java	Cuba	Formosa	Mauritius			British Guiana	
	1934	1940–41	1947–48	1941	1947	1948	1941	1946	1947	1940	1946	1947	1932	1931	1938	1941	1946	1947	1946	1947
Cane-sucrose per cent ...	11.21	12.18	12.48	14.00	13.32	13.89	11.05	12.59	12.22	16.04	14.91	15.30	13.22	13.87	13.09	13.30	13.56	14.34	11.45	11.24
Cane-fibre per cent ...	15.50	16.18	16.29	15.66	15.80	15.90	13.44	14.76	15.09	11.58	11.83	12.72	12.60	10.92	11.68	12.60	12.58	12.50	14.38	14.44
Mixed Juice purity ...	79.21	80.45	...	85.67	86.24	85.92	82.38	83.67	82.89	...	...	82.29	84.30	85.57	83.89	85.30	85.20	87.00	80.69	79.40
Extraction ...	90.65	91.22	91.51	92.37	93.94	93.32	96.32	96.38	95.94	95.46	95.31	95.86	94.60	94.62	97.62	95.20	94.90	94.90	91.62	91.45
Extraction reduced ...	92.72	93.43	93.66	94.13	95.01	94.95	96.61	97.01	96.74	95.05	94.93	95.90	94.66	93.73	97.43	95.10	94.90	94.90	92.87	92.76
Overall recovery ...	77.05	79.58	80.40	81.66	83.73	83.19	87.65	85.49	85.33	87.34	82.57	84.34	85.83	87.74	90.43	85.10	83.70	85.50	79.35	77.68
Overall recovery reduced (Technical efficiency) ...	83.35	85.04	84.96	82.61	84.09	83.85	89.44	87.09	87.59	...	...	...	86.36	86.62	90.83	84.02	83.51	83.42	83.71	83.26
Yield per cent as sugar ...	8.70	9.72	...	11.60	8.84	8.55	10.74	9.06	9.35	14.22	8.02	7.65	11.16	12.33	12.05	11.48	8.06	8.03	10.61	11.04
Yield per cent as sugar–96 polarisation ...	9.00	10.1	9.57	11.92	8.60	8.31	10.90	8.92	9.21	14.60	7.80	7.44	...	12.84	12.20	11.80	8.46	7.83	10.59	10.99

* *Vide* M. P. Gandhi's 1949 Annual, and estimates compiled by H. H. Dodds and J. L. Du Toit for the South African Sugar Technologists' Association in 1949. *Vide* ("Indian Sugar", October 1949).

Sugar Plants in India getting Obsolete for lack of renewals

In this context, we would like to point out one important factor which would militate against any great improvement in technical efficiency of factories in years to come. From Table No. 26 in the "Sugar Industry at a Glance" it will be evident that a bulk of the sugar machinery in this country was installed in 1932-33, 1933-34 and 1934-35. Out of total machinery of Rs. 14 crores imported in India till 1949-50 since 1932-33 about Rs. 6 crores worth of machinery was set up in the first 3 years till 1934-35. By now, the factories wherein such machinery was set up had a run of about 17 to 18 years and during this period they have not had much opportunity of replacement and renewals of their machinery. Most of the plants were fabricated in Europe and America. Particularly since the outbreak of the war in 1938-39, the programme of renewal has been seriously curtailed due to difficulties in obtaining machinery from abroad, high prices thereof and recent difficulties of foreign exchange. Apart from this, the sugar industry has not had an uninterrupted profitable period of working. Several factories worked without profit during the years 1944-45, 1945-46 and 1946-47 as was admitted by the Sugar Controller for India in his evidence before the Tariff Board in 1947, while others had a profit ranging on an average of 4 per cent. It has, therefore, not been possible to lay by large reserves and adequate allowances for replacement and renewal of machinery which is called for normally after a period of about 15 years. The present-day prices of machinery are four to five times the pre-war prices and this being so, it would be idle to expect any wholesale replacement of plants, and consequently any extraordinary rise in the technical efficiency of our factories until they have had an opportunity of completely overhauling and almost entirely renewing the machinery in the next few years.

We had drawn the attention of the Tariff Board of 1950 to this technical handicap and urged the necessity of making proper inquiries into the matter, but we regret to state that the Board did not appear to have appreciated this handicap in relation to the present-day efficiency of the sugar factories.

Technical Difficulties of Indian Sugar Factories

Though much has been achieved by the Indian sugar factories during the period of protection, it must be admitted that much still remains to be achieved, to enable them to face foreign competition successfully.

At present there are only 14 factories ranging between 1,400 to 2,000 tons daily crushing capacity, 72 between 750 tons 1,400 tons capacity and about 60 below 750 tons capacity. Leaving aside uneconomical units which are largely responsible for the high cost of manufacture, particularly in these days of short cane supplies and increased wages of labour, some large units have themselves hardly achieved that standard of economic limit which should normally apply to all such factories. This is mostly because of the lack of uniformity in working conditions

such as modes of cane supply, mechanical equipment, etc. We agree with the contention of those who urge that long practical experience, combined with research facilities and a thorough knowledge of technical balancing are all necessary for a satisfactory solution of the problems relating to technical aspects of sugar factories. Mr. D. R. Pharaskar recently writing on "Technical Difficulties of Indian Sugar Factories" very pointedly remarked, "Sometimes a factory conscientiously feels that the sole cause of its low recovery is the inferior quality of cane, but it may be that a factory is losing heavily through mechanical and chemical sources which escape notice".

In this respect, it will be worthwhile to know where we stand in technical superiority and excellence in comparison with the world outside. Great advances in boilers, power plants, juice heaters, piping, measuring devices and centrifugals used in the crushing of cane are reported in recent days. With a complete unit equipped with all the latest machinery under automatic control from filling of the basket to the discharge of the sugar, the attendant has only to push a few buttons to charge the machine and discharge sugar. Such a unit is capable of handling 24 charges per hour, i.e. it operates on a 2½ minute cycle. We have to admit that our machinery in our sugar mills which is installed as early as 1932-33 to 1934-35 is obsolete and can stand no comparison to the latest available (*vide* Table No. 26). The obvious difficulties in achieving a higher technical efficiency in our factories are further aggravated today by the difficulty of foreign exchange in purchasing such machinery, besides the rare availability of it owing to high demand from other countries and the increased costs.

Cane Transport Cost increased and must be lowered

One peculiarity of the sugar industry in India is its greater dependence on the gate-cane, i.e. cane grown within a radius of 15 miles from the factory, than on railborne cane. In the absence of gate-cane which is usually carried to factories by carts, lorries, etc. cane is borne by railway. The factories usually prefer gate-cane to railborne cane, as the cane by railway takes longer time to arrive, it gets dried, and its sucrose content becomes consequently less. Factories thus prefer gate-cane to railborne cane, as it is better in quality, more economical in cost and more regular in supply. In the absence of such gate-cane, most of the factories are forced to depend on railborne cane which requires greater freight, which is more costly and less superior in quality. From Table No. 21, it will be observed that nearly 70 per cent of the cane in Bihar and U.P., 95 per cent of the cane in Bombay Deccan, and 66 per cent of the cane crushed in Madras, is gate-cane. In order to facilitate the availability of such more economical and better quality cane to the factories, it is imperative that there should be better roads and better means of communication in the factory zones. It is also necessary that in view of the ideal of increased production at lower cost, cultivation of cane in factory zones should be encouraged. The State Governments can do a lot by improving the means of communication and by building *pucca*

roads from the factories to the fields and by devoting a portion of the income from cane cess.

As sufficient quantities of gate-cane are not available and as the factories are to depend on railborne cane, it is essential that cane supplies from distant areas are encouraged by a reasonable reduction in the freight, reduction in the loss of time and reasonable increase in wagons as well as in the free time allowed to factories for loading and unloading, so that no hardship is caused. In this connection, it is pertinent to note that since October 1948, the railway freight for a 12-ton wagon which was Rs. 11 was increased to Rs. 21, for an 18-ton wagon which was Rs. 12 is increased to Rs. 32, for a 27-ton wagon which was Rs. 19 is increased to Rs. 48, thus adding to the cost of production of sugar. The U.P. Sugar Factories Control Rules provided for a deduction of 3 annas per maund from the minimum price of cane in case of factories providing their own means of transport for cane, while such a provision did not exist in Bihar. It was, therefore, contended that an allowance of Re. 0-5-3 provided for in the sugar price calculations on account of transport charges, was not sufficient in the case of Bihar factories. It is essential that some consideration is given to this difficulty of the Bihar factories and that some concession is also offered in the railway freight to sugar industry. It is heartening to hear that railways are co-operating with the industry in helping it to transport cane. At a cane transport conference held in October 1950, at Lucknow, to consider the allotment of wagons for the movement of cane in 1950-51, it was revealed that the wagon allotment in 1949-50 was satisfactory, according to official version. The position of wagon allotment for 1949-50 and 1950-51 for U.P. and Bihar is summed up in the following table :

TABLE NO. L

Wagons for Cane Transport for U.P. and Bihar

	Bihar		U.P.	
	1949–50	1950–51	1949–50	1950–51
Average Daily loading (wagons) ...	130	130	627	660
Total No. of wagons ...	N.A.	N.A.	65,374	91,574
Increase percentage ...	N.A.	No increase	......	40% over last year

Co-operative Societies' Commission

This is still another item in the cost of production of sugar which goes to increase the price of sugar. Even the Tariff Board of 1950 suggested the abolition of the commission and recommended the societies to secure the needed finance for cane development from the income of the cane cess.

The following is the statement of cane supplied by Co-operative Societies in U.P. and Bihar in 1947-48 and 1948-49 seasons and the rate of commission :

TABLE No. M

Figures of Quantity in Crore maunds

Season	Quantity of Cane Supplied		Rate of Commission per maund	
	U.P.	Bihar	U.P.	Bihar
1947–48	14.2	1.30	0–0–3	0–0–3
1948–49	12.2	1.61	0–0–9	0–0–7½
1949–50	......	......	0–0–9	0–0–7½ .

Sales Tax on Sugar in U.P. and Bihar

Besides, with effect from the 1st of April 1949, a sales tax at the rate of Re. 0-0-2 per rupee is levied in the U.P. It is a single point tax payable by mills in U.P. and exporters thereof. No rebate as in the past is allowed in respect of exports of sugar outside the province. Till this date, a rebate of half of the tax was permitted on quantities exported outside the State. In Bihar, however, sales tax was levied in the 1949-50 season at the rate of Re. 0-0-3 per rupee. On the basis of 508,700 tons production in 1949-50 in the U.P., of the value of about Rs. 40.536 crores at the rate of Rs. 28-8-0 per maund (or Rs. 800 per ton approximately) the sales tax in the U.P. at the above rate works out to Rs. 42,22,500 and in Bihar on the basis of production of 222,600 tons of the estimated value of Rs. 17.80 crores, the sales tax at the rate of 3 pies per rupee works out to an approximate figure of Rs. 27,80,937. We have already stated our view that a tax on a raw material like sugar is wrong in principle and needs to be abolished to cheapen the price of sugar and lessen the burden on the consumer.

Shares of the Government, Cultivator and Workers in the Total Value of Sugar Production (During the Period 1938-39 to 1948-49)

From Table No. N below it will be seen that the total value of sugar production during the period 1938-39 to 1948-49 was approximately about Rs. 571.85 crores, the total amount of cess collected by the Government in U.P., Bihar, Bombay and Mysore was Rs. 11.433 crores, the Excise duty collected by the Government *vide* Table No. 17 in the section " the Sugar Industry at a Glance " during the period was Rs. 57 crores, the estimated amount paid by factories to cane cultivators was Rs. 252.55 crores, and the estimated amount of wages paid to unskilled workers was Rs. 7.79 crores during the same period (*vide* Table No. 13 in " the Sugar Industry at a Glance " in this Annual).

TABLE No. N

Item	Amount in Crores of Rupees
Cane Cess for U.P., Bihar, Mysore and Bombay during the period 1938-39 to 1948-49: ...	11.433
Excise duty for the period 1938-39 to 1948-49 (Incl. other taxes also) ...	56.54
Estimated Amount paid to Cane cultivators by factories:	252.55
Estimated Amount Paid as Wages to Unskilled Workers in 1938-39 to 1948-49: ...	7.79
Estimated Value of Sugar Production in 1938-39 to 1948-49: ...	571.88

The figures of total valuation of sugar as stated in the above Table are arrived at on the basis of the revised figures of production of sugar, sugar prices prevailing or fixed by the Government from time to time as follows :

TABLE No. O

Total Value of Sugar Production 1938-39 to 1949-50

Year	Total Production of Sugar (Lakh Tons)	Price of Sugar Per Maund	Total Value of Sugar in Crores of rupees (Approximate)
1938-39	7.5	9-10-0 (Average)	18.75
1939-40	13.5	9-12-0	37.40
1940-41	12.7	9- 2-0	28.36
1941-42	8.6	12- 8-0	30.10
1942-43	12.5	14- 0-0	54.00
1943-44	13.5	15- 0-0	56.74
1944-45	10.6	16- 4-0	47.86
1945-46	10.3	16-10-0	48.10
1946-47	9.01	22-11-0	57.00
1947-48	10 7	35- 7-0	108.40
1948-49	10.07	28- 8-0	79.89
1949-50	9.75	28- 8-0	73.00

Suggestions for Reduction of the Cost of Production and Price of Sugar in next five years to bring the price to Rs. 18 or 19 per maund as recommended by the Tariff Board, 1950

From the above discussion it will be evident that the high price of indigenous sugar is the result of numerous factors outside the scope of the sugar industry itself and unless the Government are determined to bring down the price, nothing can be done. In brief, the whole discus-

sion so far on the cost of production of sugar leads us to make the following suggestions for the gradual reduction in the price of sugar and sugarcane in the next 5 years so that the price of sugarcane can be brought down to Re. 1-0-0 per maund and the price of sugar by other reductions to Rs. 18 or Rs. 19 per maund by 1955 as envisaged by the Tariff Board of 1950 :

(1) The cane price is universally admitted to be high and needs to be reduced, by doubling yield and improving the quality of cane, to at least Re. 1-0-0 per maund in the next five years. This alone will help in bringing down the price of sugar to Rs. 22-4-0 per maund. This undoubtedly implies vigorous effort by the Government to bring down the general price level in the country and to intensify research in doubling yield of cane per acre and increase sucrose content of cane by improving the quality of cane.

(2) If the State cess, a major portion of which has so far gone to swell or increase the revenues of the respective States and to increase its burden on the sugar consumer, is abolished, the price of sugar can be brought down by about Re. 1-14-0 per maund. At least, even the Tariff Board of 1950 has also admitted, it needs to be reduced from Re. 0-3-0 per maund to Re. 0-1-6 per maund. If this is done the price of sugar can be brought down by Re. 0-15-0 per maund.

(3) Future development and expansion of the sugar industry in Bombay and Madras offers better scope for achieving better results in the economy of sugar price and lowering of the cost of production and cost of cane. A five-year plan to this effect would go a long way to achieve results devoutly to be wished for in the easing of the burden on the sugar consumers throughout the country.

(4) The burden of Government taxation is admittedly very high and it is reasonably expected of the Government to reduce the same whereby the price of sugar can be brought down. We suggest abolition of the sales tax and reasonable reduction in Excise duty and income-taxes and other indirect taxes which go to reduce the meagre margin of profit to the manufacturer. It should be borne in mind that a levy of a tax on a raw material is wrong in principle, and it is particularly objectionable when imposed on a raw material of an industry like sugar which has been nursed by the consumers all over the country and for which they have so far made a heavy sacrifice.

(5) It is imperative that the Government should undertake to supply raw materials such as fuel, oil cake, chemicals, etc. to the industry at controlled rates and help the industry to further reduce the manufacturing charges and other costs.

(6) Reduction in the cost of production is also possible by the extension of the crushing season or by having cane of larger sucrose content, yield and a larger recovery. All this depends on research for which Government should increase its grant. If the cane cess is to be continued even at a reduced rate, it should be seen that it is utilised in full for cane development and research in the States.

(7) It is high time that Government should put a check on ever-increasing labour charges which are rather controlled by the Government in the form of fixed wages, compulsory continuance of service during off season, dearness allowances, bonus and other amenities.

(8) There should be a large reduction in the Co-operative Society's commission. Even the Tariff Board, 1950, suggested that the funds required by the co-operative societies for cane development and marketing should be provided out of the money raised from cane cess. This would lead to a reduction of the price of sugar by about Re. 0-6-9 per maund of sugar.

If the above suggestions are implemented in a 5 year plan to bring down the price of sugar, then at the end of five years, the price of sugar can be brought down to Rs. 18 or Rs. 19 per maund as envisaged by the Tariff Board, 1950, as follows :

TABLE No. P

Estimate of Sugar Price in 1955 if the above suggestions are Implemented

Cane Price	10- 0-0
Transport of cane	0- 5-3
Provincial cess	0-15-0
Excise Duty	2- 3-3
Salaries and Wages	2- 8-0
Manufacturing Charges	2- 1-9
Net Profit	0-14-0
Estimated Price of Sugar in 1955 if the above suggestions are implemented (less credit for molasses 0-4-9)	18-10-6

We are however sceptical, looking to the present trends, if this reduction will materialise during the next five years.

CHAPTER 5

PROTECTION

Brief History of Protection to the Sugar Industry

Till 1931-32, India was importing almost completely her requirements of sugar from foreign countries especially from Java to the tune of one million tons annually valued at about Rs. 15 crores. With a view to develop the sugar industry in the country, the Government of India decided to grant tariff protection to the Indian Industry. For this purpose, the Sugar Industry Protection Act was passed in 1932. The year was memorable in the history of the Indian sugar industry, for it is since this year that the history of modern sugar industry can be said to have begun. Protection was guaranteed for an initial period of 14 years ending 31st March 1946.

In the Sugar Industry Protection Act, 1932, a statutory provision was made providing for an enquiry to be held before 31st March 1938 so as to enable the Government to determine what measures should be adopted for the remaining period of 8 years. It was also provided that if at any time during the currency of the Act, it was found that foreign sugar was being imported in India at a price which was likely to render the protective duty ineffective, Government should have power to levy additional offsetting duties on imported sugar. Accordingly, the revenue duty which was Rs. 9-1-0 per cwt. was converted into a protective duty of Rs. 7-4-0 plus a surcharge of 25 per cent of this protective duty, i.e. Re. 1-13-0 per cwt. The surcharge of 25 per cent of the import duty served as an extra protection to the indigenous sugar industry which began to develop very rapidly. The vacuum pan factories increased to 57 in 1932-33 and 112 in 1933-34 from only 29 in 1930-31. But this resulted into a serious fall in the customs revenue from Rs. 10 crores in 1930-31 to Rs. 2 crores in 1933-34. It was also found that the benefit of protection was reaped entirely by factory-owners and not by the cane-growers for whose benefit the protective scheme had been primarily devised.

So the Government reviewed the whole position in 1934 and decided on a two-fold line of action to neutralise extra protection enjoyed by the factories, to benefit the growers and to increase the Government revenue which had suffered. It took the following measures :—

(1) Imposition of excise duty on factory-produced sugar at Rs. 1-5-0 per cwt. which reduced the amount of protection from Rs. 9-1-0 to Rs. 7-12-0 per cwt. This enabled Government to recoup a part of the revenue lost by protection.

(2) The Central Government passed legislation enabling the Provincial Governments to enforce a minimum price to be paid by factories to the cane-grower.

The Finance Act, 1937, raised the import duty from Rs. 9-1-0 to Rs. 9-4-0 per cwt. and increased the excise duty from Re. 1-5-0 to Rs. 2 per cwt. and this reduced the amount of protection from Rs. 7-12-0 to Rs. 7-4-0 per cwt. which was the amount recommended by the Tariff Board. This duty was to expire on 31st March 1938. Towards the end of 1937, Government appointed a Tariff Board to inquire and report as to what amount of protection should be granted to the industry.

The Tariff Board in its report submitted in December 1937 recommended that a protective duty of Rs. 7-4-0 per cwt. should be levied for a period of eight years ending 31st March 1946. Pending Government's decision on the Board's report, the then-existing duty of Rs. 7-4-0 per cwt. was extended by one year from 1st April to 31st March 1939.

In the meantime, the price of imported sugar had gone up to some extent. Moreover, in 1938, the Governments of U.P. and Bihar had taken extensive measures to exercise control over the sugar industry by imposing a cess on cane supplied to factories and had decided to enforce minimum price regulations more rigidly than in the past. The Government of India took account of all these changes and decided to extend protection by two years ending on 31st March 1941 as follows :—

(1) The amount of protective duty was fixed at Rs. 6-12-0 per cwt., i.e. 8 annas per cwt. less than that recommended by the Board.

(2) Government proposed that a fresh inquiry should be held in 1940 so as to enable them to decide what amount of protection should be given after 31st March 1941.

In March 1940, the excise duty on factory sugar was increased to Rs. 3 from Rs. 2 by one rupee per cwt. and to offset this, the total import duty (protective duty plus excise duty) was raised from Rs. 8-12-0 to Rs. 9-12-0 per cwt.

In April 1942, a revenue surcharge of 20 per cent on the import duty was imposed and the total duty was thereby raised to Rs. 11-11-2 per cwt. This duty was continued from time to time without a fresh enquiry until 31st March 1947. When the Tariff Board held a summary inquiry in February 1947,* the Board recommended that

(1) the then existing protection should be continued for a further period of two years ending 31st March 1949, and

(2) a Tariff Board inquiry should be instituted during the latter half of 1948.

In the first instance, the protective duty was continued by the Government till the 31st March 1948 and later on by another order till 31st March 1949.

In April 1948, the Government referred the case of the industry for continuance of protection to the Tariff Board for investigation. An

* Mr. M. P. Gandhi, Editor of this *Annual* was associated with this inquiry as a Technical Adviser to the Indian Tariff Board in 1947.

inquiry was held in December 1948 and the Tariff Board recommended that

(1) protection should be continued for a period of two years ending 31st March 1950, and

(2) suggested a detailed inquiry at the beginning of 1950 in order to determine the quantum of protection if any that would be necessary after the 31st March 1951.

After referring the matter to the Central Legislative Assembly for consideration, the Government continued protection to the industry for a further period of one year, i.e. till 31st March 1950.

On the 1st of June 1949, by a special resolution, the Government of India asked the Tariff Board to make a comprehensive inquiry into the conditions governing the continuance of protective duty on sugar beyond 31st March 1950. Subsequently, the Board was asked to inquire into the working of the Indian Sugar Syndicate. The inquiry was undertaken in December 1949 and the Tariff Board submitted its recommendations which are given in detail hereafter.

Excise Duty and Import Duty on Sugar, Sugar Candy and Molasses in India

A proper idea of the excise duty and import duty levied by the Government on sugar can be had from Table No. 15 given in "The Sugar Industry at a Glance" section, on page xi.

Revenue Duty replaces Protective Duty from 1st April 1950

Accordingly a clause in the Finance Bill, 1950, provided that the existing protective duty on sugar, which lapsed on March 31, 1950, was converted into a revenue duty after that date and be levied and collected at the same rate as at present. The formula for the calculation of the duty is the rate at which excise duty is for the time being leviable on Indian sugar plus Rs. 6-12-0 per cent plus one-fifth of the total duty. This Worked out to Rs. 12-9-7 per cwt., till March 1951. After 1st March 1951 it was increased to Rs. 13-2-0 per cwt. as a result of extra surcharge of 5 per cent on import duty.

U.P. and Bihar Governments withdraw recognition to Syndicate

The Notification No. 1071-S/XVIIIC-64/1950 dated 23rd March 1950, issued by the Government of U.P. Industries (C) & Excise Department, Lucknow, directed an amendment in Form 6 of Appendix III of the U.P. Sugar Factories Control Rules. It will be noted from the same that Condition No. 2 reading as follows was deleted and that the other conditions were re-numbered accordingly :—

> "The Licensee shall be a member of the Indian Sugar Syndicate Ltd., throughout the period of this licence".

SOME IMPORTANT CONCLUSIONS AND RECOMMENDATIONS OF THE TARIFF BOARD, 1950, AND OUR BRIEF COMMENTS THEREON

I. World Sugar Situation, Imports and Protection

1. "The World Production of sugar during the 1949-50 season is expected to increase by about 2 to 4 per cent." (This expectation of the Board was amply justified by facts as will be seen from our section in "World Sugar Situation.")

2. "The question of protection from external competition has not yet become so important as it was in the pre-war period."

3. "On the basis of our estimates of demand and supply at the present time the maximum import that may be required is not likely to exceed 1 lakh tons."

4. "If there is a change in the Government policy regarding imports of sugar in the near future, giving rise to severe competition from foreign imports so as to jeopardize the position of the sugar industry, it will be open to the industry to approach the Government for the restoration of protection. And we have no doubt that the Government will institute an inquiry to review the position as expeditiously as possible and restore protection to the industry if it is found to be justified."

5. "The difference between the present price of indigenous sugar (Rs. 28-8-0) and the estimated landed cost (Rs. 22-8-0) being Rs. 6 per maund, the present duty of Rs. 6 per maund would give adequate protection to the indigenous sugar industry, if such protection were needed."

6. "There is, however, no danger of any competition from low-priced imports of sugar on an appreciable scale for the next two or three years, because the surplus sugar available for the "Free Market" is likely to continue to be small and, particularly, because in the context of the present balance of payments position of the country, Government are not likely to permit imports of large quantities of sugar."

7. "We have felt that the continuance of protection for the last 18 years has produced an attitude of complacency on the part of the three parties, viz. *Government, the industry and the cultivator* who are responsible for the efficiency of the industry, and consequently, they have not taken sufficient steps to improve the overall efficiency of the industry so as to bring down its cost of production. (We have shown in our comments hereafter in this Annual, especially in the section "Cost of Production of Sugar", how the Tariff Board was not fully justified in including the industry among the parties responsible for the high cost of production of sugar.)

II. Cost of Production and Ex-Factory Price of White Sugar

1. "According to our estimate, the fair-ex-factory price of indigenous sugar (E-27) can be reduced to Rs. 24-12-0 in 1950-51." (This expectation of the Tariff Board, we regret, was not fulfilled by the Government when it permitted increase in the price of cane by annas 2 per maund to Re. 1-12-0 and consequently the price of sugar in 1950-51 was increased to Rs. 29-12-0.)

2. "The State Governments of U.P. and Bihar have spent only a fraction of the proceeds of cane cess on cane development work, the balance of the collection being absorbed in their general revenue." "It is therefore strongly recommended that all the Provincial Governments should either spend the major part of the proceeds of the cane cess on intensive cane development work so as to bring about rapid reduction in the cost of cane, or alternately, reduce as soon as practicable, the rate of the cess to a more reasonable figure, consistently with the requirements of the cane development programme." (We have given our detailed comments on the question in the section "Cane Cess and Cane Development" and "Cost of Production of Sugar".)

3. "The Minimum Price for E-27 quality of sugar for 1950-51 should be fixed at Rs. 24-12-0 per maund. If however our recommendation regarding the permanent employment of the technical staff, viz. shift chemists, shift engineers, chemists in charge of laboratory, laboratory chemists, head panmen and panmen is given effect to by the industry, the estimate of fair ex-factory price may be increased by Re. 0-0-9 per maund of sugar."

4. "Consistently with the probable requirements of cane development, the cane cess can be reduced from Re. 0-3-0 to Re. 0-1-6 per maund and the Provincial Governments should effect such a reduction as early as possible." (If the recommendations were implemented by the State Governments, the price of sugar would have been brought down by Re. 0-15-0 per maund as a result. Our comments are given elsewhere in this *Annual*.)

5. "Considering all factors, it can be reasonably expected that, apart from any marked rise in the general price level of the country, the fair ex-factory price of sugar can be brought down to Rs. 18 or Rs. 19 per maund in a period of four or five years." (We agree with this view. See comments in "Cost of Production of Sugar" section in this *Annual*.)

6. "From the point of compensating Government for the loss of revenue on imported sugar, the present excise duty levied on sugar cannot be regarded as excessive." (See our comments in the section "Cost of Production of Sugar". If at all the question of compensating Government for the loss of revenue from imports is to be considered, then revenue from other taxes must also be taken into consideration.)

7. "Expenditure towards co-operative societies' commission is incurred by sugar mills only in U.P. and Bihar. The main function of these societies at present is development and marketing of cane, which is also largely the business of the Government's Cess Development Department. Therefore, the funds required by these co-operative societies for cane development should be provided out of the money raised from cane cess." (We agree with the suggestion. If it is abolished the price of sugar can be reduced by about Re. 0-6-9 per maund.)

8. "The present procedure of fixing the prices of sugarcane and sugar is defective in several respects." (We have been holding the same view, *vide* comments in the 1949 and 1950 *Annuals.*)

III. Sugarcane Price and Sugarcane Development and Research

1. "To ensure definite progress towards increase in the yield of cane and consequent reduction in its cost and price in a period of four or five years, it is necessary that the success of the various research and development programmes undertaken by the Central and Provincial Governments, *should be measured in future only in terms of a reduction in the price of cane consequent on the increase in yield and improvement in quality.*" (For comments *vide* section on "Agricultural Problems of Sugar Industry" in this *Annual.*)

2. "Judging by the figures of collection and expenditure on cane cess on cane development, we consider that the Provincial Governments can and should contribute larger amounts for development work in their own areas."

3. "The best method for overcoming pests and diseases is the use of pest and disease resistant varieties of cane, the testing of which should be given due importance at the sugarcane research stations. It is equally important to ensure that the results of research undertaken at various institutions should actually reach the cultivator at the farm and the manufacturer at the factory." (We feel gratified that the Tariff Board has commended our suggestion, *vide* our *Annual* 1949.)

4. "The percentage of extra fuel, namely coal, firewood, etc. consumed by the Indian factories has definitely gone down in recent years." (Here again the Tariff Board have endorsed our view.)

5. "The average price of gur in the next 2 or 3 years is estimated at Rs. 12-15-7 per maund." (This expectation too was not fulfilled by the Government as they raised the price of gur from Rs. 19 to Rs. 23 in 1950-51.)

6. "On the basis of the estimated cost of cultivation of cane for India as a whole and a fair price of cane based on the estimated return from gur, a price of Re. 1-7-0 per maund of cane may be regarded

as fair in the present circumstances. When, however, the intensive research and development programme now taken in hand by the Provincial Governments are carried out, the price of cane may be reduced to Re. 1-4-0 in the next two or three years and possibly to Re. 1-0-0 per maund in a period of five years." (Though Government on the contrary by increase in the cane price by two annas to Re. 1-12-0 per maund did not reject the suggestion of the Tariff Board, because of some political considerations, yet we feel that the Tariff Board's suggestion was the only reasonable suggestion under the present circumstances and, if given effect to in future, is likely to reduce the price of sugar from Rs. 29-12-0 to Rs. 22-0-0 per maund in a period of five years." See our comments in " Cost of Production of Sugar " section, in this *Annual.*)

7. " The cost of production of gur per maund exclusive of the price of cane ranges from Rs. 2-10-6 in U.P. and Rs. 7-6-0 in Assam." (On the basis of this conclusion reached by the Board, the price of gur per maund would have been only Rs. 17-10-6 in the U.P. and Rs. 22-6-0 in Assam. The Government have, however, fixed prices from Rs. 19 in U.P. to Rs. 23 per maund in other places.)

PROTECTION FOR SUGAR INDUSTRY WITHDRAWN FROM 1st APRIL 1950

The Government of India's Resolution on the more urgent recommendations made by the Tariff Board in its report on the question of protection to the sugar industry relating to:

(1) The Indian Sugar Syndicate;

(2) The Sugar Crisis of July-August 1949; and

(3) Protection;

was issued in a Gazette Extraordinary of 6th March 1950.

As regards (1), the Tariff Board, after exhaustively examining the activities of the Syndicate since its inception, has recommended that Clause (A) of Section 11 of the Sugar Factories Control Acts and the rule made thereunder which requires all factories in the U.P. and Bihar to be members of the Syndicate as a condition precedent to their obtaining the Annual Crushing Licence should be rescinded. Whether the Syndicate should continue as a voluntary organisation of some or all of the sugar mills in the U.P. and Bihar will be left to be decided by the mills themselves without interference from Government. The Government of India agreed with this conclusion and agreed to move the U.P. and Bihar Governments in this behalf.*

* This clause was rescinded before the 1950-51 season commenced in U.P. and Bihar.

As regards (2), the Tariff Board considered that the main contributory factors were :—

(A) large and rapid quotas released by the Syndicate; and

(B) excessive wagon supply.

The Board recommended an investigation regarding (B) and also into the allegation that sugar intended for consumption in India was in fact moved into Eastern and Western Pakistan on an appreciable scale in 1949 which possibly contributed to the scarcity.

The Government accepted the recommendations. The question whether any further enquiry was necessary regarding the sugar crisis of July-August 1949 also engaged Government's attention. A notification to this effect was issued on 12th June 1950 by the Ministry of Agriculture. Government of India, appointing Shri Ganga Nath, retired Judge of the Allahabad High Court to conduct an enquiry into the allegation concerned. An Ordinance called "The Sugar Crisis Enquiry Ordinance, 1950" was promulgated by the President in September 1950 authorising the enquiry and vesting the Sugar Enquiry Committee with all the powers of a civil court relating to recording of evidence, issue of summons, enforcement of attendance, examination on oath and procurement and discovery and production of any document. The Committee issued different questionnaires to be replied among others by the Indian Sugar Syndicate, the State Governments and the Indian Sugar Mills' Association. Mr. Des Raj Narang, Chairman of the I.S. Syndicate, giving evidence before the Committee on August 4, 1950, charged the Government for the muddle. The full report of the enquiry was not published till May 1951. A summary was published.

As regards Protection, the Government also accepted the recommendation that protection to the sugar industry should not be continued beyond March 31, 1950, Government being free thereafter to impose such revenue duty as they considered necessary.

Government Resolution on Tariff Board Report

The Resolution No. 33(1)-T.B./50 dated the 6th March 1950, issued by the Government of India, Ministry of Commerce, New Delhi, on the subject was as follows :—

"The Government of India have considered the Report of the Indian Tariff Board on the sugar industry. The recommendations therein cover a very wide field. On the more urgent among them, Government have decided after careful consideration to take action as indicated hereafter. Government will examine the other recommendations and announce their decisions thereon, as early as possible.

I. *The Indian Sugar Syndicate*

"After exhaustively examining the activities of the Syndicate ever since its inception, including the part played by it during the sugar crisis of July-August 1949, the Board has stated :—

'In recent years, the Indian Sugar Syndicate's control over its members has been ineffective. The Syndicate does not appear to have ever tried to improve the efficiency of its members or carry out research in respect of sugarcane and sugar. Nor does it appear to have ever taken any effective steps to prevent its members from charging high premium for sugar in conditions of scarcity. On the contrary, it has, whenever free from control, abused its monopolistic powers so as to help its members make large gains at the expense of the consumer.'

'Subsequent to decontrol of sugar in December 1947, the Syndicate showed its reluctance to submit itself to control and supervision by the Sugar Commission of the Governments of U.P. and Bihar.'

'In its dealings with the Government of U.P. and the Sugar Commissioner regarding the release of sugar quotas in 1949, the Syndicate was far from being straightforward.'

'By its improper policy of quota releases and approaching the Government of India in June 1949, to negotiate for the export of sugar, the Syndicate created a psychology of scarcity in the country which led to hoarding by merchants and consumers like confectioners.'

It has then reached the following conclusions :—

'The Governments of U.P. and Bihar should rescind clause (a) of Section 11 of the Sugar Factories Control Acts and the Rule made thereunder which requires all factories in the two Provinces to be members of the Syndicate as a condition precedent to their obtaining the annual crushing licence. As to whether or not the Syndicate should continue as a voluntary organisation of some or all of the sugar mills in the two provinces it is considered appropriate and desirable that the matter should be left to be decided by the mills themselves without any interference from Government.'

The Government of India agree with this conclusion and propose to move the U.P. and Bihar Governments in this behalf."

This has been done since.

II. *Sugar Crisis*

"The Board has stated that the main contributory factors which caused the sugar crisis of July-August 1949 were :—

(a) large and rapid quotas released by the Syndicate and
(b) excessive wagon supply.

In view of the decision reached with respect to the Syndicate it is not necessary to dilate on the question of these particular quota releases. On the question of excessive wagon supply the Board has recommended that ' in the public interest this matter should be fully investigated.'

The Board has also recommended that ' Government should institute an enquiry into the allegation that sugar intended for consumption in India in fact moved into Eastern and Western Pakistan on an appreciable scale in 1949 ' and this also possibly contributed to the scarcity.

Government accept these recommendations and necessary action will be taken to implement them."

Further, in the course of the debate on sugar in the Constituent Assembly (Legislative) on 24th December 1949, Government stated that ' to the extent the Tariff Board Report on the sugar industry does not cover any aspect of the sugar crisis which occurred during July-August 1949, Government will arrange to have a full enquiry made by a body which thoroughly satisfies the House.' The question whether any such further enquiry is necessary regarding the sugar crisis, and if so, what its scope should be is now engaging the attention of Government and a decision thereon will be taken shortly.

III. *Protection*

Recommending withdrawal of protection to the sugar industry, the Board has stated : " The difference between the present price of indigenous sugar (Rs. 28-8-0) and the estimated landed cost (Rs. 22-8-0) being Rs. 6-0-0 per maund, the present duty of Rs. 6-0-0 per maund would give adequate protection to the indigenous sugar industry if such protection were needed. There is, however, no danger of any competition from low-priced imports of sugar on an appreciable scale for the next two or three years, because the surplus sugar available for the " free market " is likely to continue to be small and, particularly, because, in the context of the present balance of payments position of the country Government are not likely to permit imports of large quantities of sugar. Further, according to our estimate, the fair ex-factory price of indigenous sugar (E-27) can be reduced to Rs. 24-12-0 per maund in 1950-51. We have felt that the continuance of protection for the last 18 years has produced an attitude of complacency on the part of the three parties, namely, Government, the industry and the cultivator, who are responsible for the efficiency of the industry, and that, consequently, they have not taken sufficient steps to improve the overall efficiency of the industry so as to bring down its cost of production. We, therefore, consider that this is the most suitable opportunity to withdraw the protection without any serious risk to the industry. We, accordingly, recommend that the protection to the sugar industry should not be continued beyond 31st March 1950, Government being free thereafter to impose such revenue duty as they consider necessary."

"If there is a change in Government's policy regarding imports of sugar in the near future, giving rise to severe competition from foreign imports so as to jeopardize the position of the sugar industry, it will be open to the industry to approach Government for the restoration of protection. And we have no doubt that Government will institute an enquiry to review the position as expeditiously as possible and restore protection to the industry, if it is found to be justified."

Government accepted this recommendation and action was taken to give effect to it.

OUR VIEWS ON WITHDRAWAL OF PROTECTION

We have been advocating the need for continuance of protection * to the sugar industry till 31st March 1953 and we regret that the Government of India have decided to discontinue protection to the sugar industry as from 1st April, 1950.

The grounds on which the Tariff Board recommended the withdrawal of protection are:

(1) That the continuance of protection for the last 18 years has produced an attitude of complacency on the part of three parties, namely, Government, the industry and the cultivator, who are responsible for the efficiency of the industry and that consequently they have not taken sufficient steps to improve the overall efficiency of the industry so as to bring down its cost of production.

(2) That the fair ex-factory price of E-27 can be reduced to Rs. 24-12-0 per maund in 1950-51.

(3) That there is no danger of any competition from low-priced imports of sugar on an appreciable scale for the next two or three years because surplus sugar available for the "free market" is likely to continue to be small and particularly because in the context of the present balance of payments position of the country, Government are not likely to permit imports of larger quantities of sugar. And if there be a change in the Government's policy regarding imports of sugar in the near future, giving rise to severe competition from foreign imports so as to jeopardize the position of sugar industry, it should be open to the industry to approach the Government for the restoration of protection.

(4) That the difference between the estimated landed cost (Rs. 22-8-0) and the present price of indigenous sugar (Rs. 28-8-0) being Rs. 6-0-0 per maund, the present duty of Rs. 6 per maund, would give adequate protection to the indigenous sugar industry, if such protection were needed.

* *Vide* M. P. Gandhi's Memorandum to the Indian Tariff Board in his 1949 Sugar *Annual* on page lvii. and his views on protection on pages v-vii.

Sugar Industry fared tolerably well during period of Protection

Though we have nothing whatsoever to say against the recommendations (3) and (4) above, we do not feel that the Tariff Board and the Government were fully justified in their recommendations (1) and (2) above on the subject of the efficiency of the Indian sugar factories and the ex-factory price, for we feel convinced that the industry has done tolerably if not magnificently well during the period of protection of 18 years and justified continuance of protection and that the fair ex-factory price is not capable of reduction unless the price of cane, or Government duties are reduced to a certain extent as the cane price constitutes nearly 60 per cent, and Government duties constitute 17 per cent of the price of sugar.

The following table will make it clear that the manufacturing charges which in spite of high costs today stand appreciably reduced, are not capable of further reduction nor can the profit margin which is too low, and which serves as an incentive bear any reduction.

TABLE No. A

Percentages of Costs of Sugar Production in India

—	1932–33 to 1937–38	1938–39 to 1940–43	1943–44 to 1945–46	1946–47 to 1948–49
Cane	44.36	50.67	54.37	59.64
Manufacturing	20.39	13.46	15.39	10.53
Salaries and Wages ...	8.06	5.64	6.04	9.74
Government	14.21	24.22	20.75	16.89
Profit	12.40	6.01	3.85	3.20

It will be seen that cane price constitutes nearly 60 per cent of the price of sugar and has gone up by 35 per cent since pre-war years, and for this reason we have been emphasizing that the protection given to sugar is in effect protection given to sugarcane cultivation which again is an integral part of India's agricultural economy.

The sugar industry which is the second largest industry in the country, next only to Cotton Textile Industry, we have been stressing, has stopped the drain of about Rs. 16 crores per annum with the practical cessation of imports, is supporting not less than 20 million agriculturists whose interests are indissolubly linked up with the future of this industry, has provided a channel of investment to indigenous capital to the tune of about Rs. 33 crores, has been responsible for giving employment for not less than 3,500 University men and 130,000 labour, skilled and unskilled, and has been responsible for augmenting the income of millions of cultivators as a result of the production of gur and sugar valued at about Rs. 260 crores per year.

The protection for the last 17 years has gone to increase the income of the Government and cultivators as follows:—

TABLE No. B

Shares to Government and Cultivators in last 17 years of Protection (1932-1949)

	Crores of Rupees
GOVERNMENT (Total)	115
(a) Provincial Governments from cane cess ...	25
(b) Central Government	90
(1) From Excise Duty	70
(2) From Income Tax	20
CANE CHARGES (Total)	325
(a) Cultivator	315
(b) Transport	5
(c) Commission to Co-operative Societies ...	5

Total production of sugar in the last 17 years being approximately of Rs. 600 crores, nearly 54 per cent of the total value, can be said to have been disbursed towards cane and 18 per cent towards Government.

Table 39 in this Annual will show that the Indian factories showed a good progress in technical efficiency, it being in 1940-41 better than Natal and equal to Mauritius. So also overall recovery cannot be said to be bad in comparison to figures in other sugar producing countries in the world.

It will be noted that technical efficiency was 85.04 in India in 1940-41 (as against 83.33 in 1934 in India) as compared with 84.02 in Mauritius, 86.62 in Cuba and 86.36 in Java in 1941. So also the yield percentage of sugar improved to 9.72 in 1940-41 as against 8.72 in 1934 in comparison with that of 11.48 in Mauritius, 11.16 in Java and 12.33 in Cuba in 1940-41.

Progress of Industry in 18 years of Protection

What tremendous strides were made by the industry during these 18 years since 1932-33 can be imagined from the Statistical Section of this Annual, which shows that the number of operating mills increased from 31 to 134, cane crushed in mills increased from 1,784 thousand tons per season to 12,138 thousand tons in 1943-44 ; average cane crushing capacity of factories increased from 517 in 1934-35 to 740 in 1948-49 ; sugar production increased from 158 thousand tons in 1932-33 to 1,216 thousand tons in 1944-45 and 975 thousand tons in 1949-50 (in spite of diversion cane to gur production); a virtual total cessation of imports of foreign sugar from 1942-43 onwards which amounted to 536 thousand tons in 1931-32, a slow rise of sugar percentage cane from 8.89 in 1932-33 to 10.28 in 1942-43. The one thing that did not increase and did not show improvement and which was outside the scope of the industry was average yield of cane per acre which is found to have decreased from 14.1 tons

in 1932-33 to 13.2 tons in 1944-45 as compared with the average yield (in tons) 56.2 in Java, 28.27 in Formosa, 21.34 in Australia, 19.63 in Mauritius, 17.12 in Cuba, and 14.7 in India in 1946.

Tariff Board not justified in blaming Industry

In view of the above facts among others, we feel that the Tariff Board was not entirely justified in allocating the entire blame for inefficiency on the sugar industry and recommending withdrawal of protection. Recent events have falsified the expectation of the Tariff Board regarding the reduction of the price of sugar to Rs. 24-12-0 from Rs. 28-8-0 per maund, when the Government themselves have felt justified in increasing the price of cane to give more relief to the cultivators.

Feeling of Security shaken !!

As a result, therefore, of the Government's desire to terminate protection to the sugar industry at the end of March 1950, the feeling of security existing in the mind of the interests associated with the industry for the last 18 years has doubtless disappeared. At the same time, it should be clearly understood that this decision of the Government on the recommendation of the Tariff Board does not expose the industry to any unbridled competition from foreign imports, or does not warrant the inference that the interest of the Government in the welfare of this industry has at all weakened. Far from it, the replacement of the protective duty, on its expiry, by a revenue duty of the same dimension is a positive proof of this, particularly when it is known that there is at present a virtual embargo on import of sugar for the last three years, which bids fair to continue for some time, at any rate until the severe financial stringency and the balance of payments position ease to some extent and unless the Government decide to import specific quantity to meet the shortfall of production in India, on their own account. That, however, cannot bring harm to the industry and would satisfy the consumer, as was done by the Government in 1950, by purchasing foreign sugar to the extent of 60,050 tons at prices higher than the price of sugar in India.

No Cause for Apprehension of large-scale Imports

There is no cause for apprehension, therefore, of any largesized imports of sugar at cheaper prices which would jeopardize the indigenous industry.

Firstly, sugar from sterling areas in large quantities is unavailable.

Secondly, Indonesia does not produce sufficient sugar yet to be able to export.

Thirdly, even if some sugar is available, the present landed cost in India, with the addition of the revenue duty of Rs. 9-10-3 per maund and the Town Duty, will not make it available in the country at a cheaper rate.

Fourthly, import of sugar from Cuba, a Dollar Currency area, cannot be thought of owing to scarcity of Dollar Exchange; and above all, the Government of India will be extremely reluctant, to my mind, to import sugar and spend valuable foreign exchange on it, particularly, when they are determined to stop the importation of foodgrains which are vital for the existence of the people in the present deficit of Indian production of foodcrops.

The people will have to learn to make do with gur, an acceptable substitute, the production of which is about 3½ times the production of sugar, and which is available in plenty. Thus, there is no cause for apprehension. At the same time, the imperative need before the industry is that of reducing the price of sugar, and to that end, the largest single factor, viz. cane price, should be appreciably reduced. This again will depend upon a reduction in the cost of production which will only be possible if the average yield per acre is appreciably enhanced from 14 tons to about 25-30 tons. For that purpose practical schemes of research in co-operation with the industry must be undertaken with vigour. Reduction in Provincial Cesses and Governmental taxation can also give some relief. The U.P. and Bihar Governments will have to do some hard thinking about these matters, for the existence of the industry and the maintenance of the interests of cane cultivators, vital for the economy of those Provinces, will depend upon the success they achieve in these directions at the earliest date.

Total Value of Production of Sugar and Gur in India (1946-47 to 1949-50) and Role of Sugar Industry in Country's Economy

On the basis of the revised figures of production of gur and sugar, the total value of the production of sugar and gur in India in 1946-47 was Rs. 218 crores, in 1947-48 Rs. 254 crores, in 1948-49 Rs. 206 crores, and in 1949-50 was Rs. 262 crores approximately as follows:—

TABLE No. C

The Total Annual Value of the Production of Sugar and Gur

Year	Production in Lakh Tons		Average price of				Total Value in Crores of Rupees		
			Sugar		Gur				
	Sugar	Gur	Per Maund	Per Ton	Per Maund	Per Ton	Sugar	Gur	Total for Sugar & Gur
1946–47	10.0	35.74	22–11	635	16	450	57	161	218
1947–48	10.7	34.92	35–7	994	16	450	108	146	254
1948–49	10.07	28.30	28–8	518	16	450	79	127	206
1949–50	9.75	27.14	28–8	518	25	700	73	189	262

It will be seen that with a production worth Rs. 206 crores to Rs. 262 crores per year, sugar industry is one of the largest industries in the country. Its value of production compares well with the largest national industry in the country namely, the cotton textile industry, the total value of the production of which is estimated at about Rs. 600 crores per year. Such an industry is vital and indispensable to the country and it should be the duty of every well-wisher of the country to create conditions for the expansion and further progress of the industry so that in course of time it may be possible for it to supply at least double the quantity of sugar and gur which will be required for meeting the nutritive requirements of the people, and indeed even for export of sugar to neighbouring countries, at no distant date.

CHAPTER 6

CANE CESS AND EXPENDITURE ON CANE DEVELOPMENT AND RESEARCH

Cane Cess goes to increase Price of Sugar

A review of sugar prices in recent years at once suggests the great necessity of a reduction in the price, both because it operates as a hardship on the consumer and retards the consumption of sugar which is the very basis of sugar economy. It further creates difficulties in export of sugar to various neighbouring countries like the Middle East, Persian Gulf Ports, Burma, Ceylon and Pakistan who are unable to get their requirements from India due to the high price of Indian sugar. One of the elements which goes to raise the price of Indian sugar is sugarcane cess. This along with the Excise duty which works out at Rs. 2-12-0 per maund, Co-operative Society's commission of Re. 0-0-9 per maund and the increasing and increased price of cane serves to keep the price of Indian sugar at a very high level and the burden of increased price is constantly felt by the consumer when he realises that the price of sugar in some of the countries of the world like Brazil, Cuba, Soviet Russia, Formosa, etc. is reported to be lower. If the price of Indian sugar is to be reduced and brought in parity with world prices it is imperative that not only there should be greater effort to improve yield but also such superfluous items like cane cess in the price of sugar should be removed, because we are convinced that the sugarcane cess though collected for the ostensible purpose of cane development has in many cases gone to swell the State revenues. If the cess is abolished, the price of sugar can be brought down by Re. 1-14-0. If it is reduced from Re. 0-3-0 per maund to Re. 0-1-6 per maund, the price of sugar can be brought down by Re. 0-15-0 per maund.

From Table No. A it will be evident that only a part to the extent of 30 per cent of the total amount collected as cess has been devoted to cane development and research and a major portion to the extent of 70 per cent has gone to swell the revenues of the States. The Tariff Board of 1950 also confirmed this conclusion.

Cane Cess in U.P. and Bihar and Expenditure on Cane Development

The U.P. and Bihar Governments have been levying cess on the amount of cane crushed by the sugar factories since 1938-39 in order to raise revenue for the purpose of cane development, although only a part of the total annual revenue has been spent on the development work. According to the Tariff Board, on the basis of the figures received from the Cane Commissioner, U.P. and Bihar, the total proceeds of cess since 1938-39 to 1948-49 for a period of 10 years amounted to Rs. 841.0 lakhs in U.P. and Rs. 297.0 lakhs in Bihar. Of this amount, it is regrettable, that only Rs. 172 lakhs and Rs. 144 lakhs were spent by the U.P. and Bihar Governments respectively on development and research work during a period of 10 years. This total amount of Rs. 3.16 crores spent by both the Governments out of a total cess collection of Rs. 11.38 crores works out to approximately 30 per cent of the total amount collected by both the Governments. The Table below will show the rate of cess since 1938-39 to 1943-44, the figures for subsequent years are given in Table " B ".

TABLE NO. A

Rate of Cane Cess in U.P. and Bihar (1938-39 to 1943-44)

Year	U.P.	Bihar	Year	U.P.	Bihar
1938-39 ...	0 0 6	0 0 6	1941-42 ...	0 0 6	0 0 6
1939-40 ...	0 0 6	0 0 6	1942-43 ...	0 0 6	0 0 6
1940-41 ...	0 0 9*	0 0 9*	1943-44 ...	0 1 0	0 1 0.

* 6 pies out of this were for repayment of loan. It was also collected at 1 anna at some places and out of this 6 pies were for repayment of excise loan.

For the first time in 1947-48 a cane cess of Rs. 6 per ton of cane was levied in Mysore. The rate of cess was the same in 1948-49 when about Rs. 12 lakhs were collected from cess. The total collection for 1947-48 and 1948-49 is estimated at Rs. 24 lakhs. It is not known how much of this amount is spent on cane development by the State concerned.

Cane Cess in Bombay since 1948

In October 1948 a cane cess at the rate of annas 3 per Bengal maund was for the first time levied in Bombay and was made applicable retrospectively on cane consumed in factories with effect from January 1948. The proceeds were proposed to be spent on cane development. In 1949-50 season, the cane cess at 1948-49 rate of annas 3 per maund was continued in the Bombay State. The receipts from sugarcane cess

TABLE NO. B

Statement showing the Rate of Cess, Total Income from Cess and Expenditure on Cane Development and Research

Year	U.P. (a)			Bihar (a)			Bombay			Mysore		
	Rate of cess per maund of cane	Total income from cess (Rs. lakhs)	Expenditure on cane Development Schemes (Rs. lakhs)	Rate of cess per maund of cane	Total Income from cess (Rs. lakhs)	Expenditure on cane Development Schemes (Rs. lakhs)	Rate of cess per maund of cane	Total Income from cess (Rs. lakhs)	Expenditure on cane Development Schemes (Rs. lakhs)	Rate of cess per maund of cane	Total Income from cess (Rs. lakhs)	Expenditure on cane Development Schemes (Rs. lakhs)
1944–45	0 1 0	111.92	2.57	0 1 0	7.49	...	...	...	...	...	...	...
1945–46	0 1 0	93.63	1.93	0 1 0	18.05	8.07	...	...	...	...	...	...
1946–47	0 1 0	87.05†	1.17	0 1 0	35.10	9.61	Nil	Nil	Nil	...	...	...
1947–48	0 3 0	186.67†	...	0 3 0	24.57	11.43	...	...	Nil	0 3 6*	...	...
1948–49	0 3 0	312.00†	37.8	0 2 0	63.19	14.378	0 3 0	41.80§	Nil	0 3 6*	12.0	...
1949–50	0 3 0	214.04(c)	41.4	0 3 0	70.0 (b)	13.0 (b)	0 3 0	50.0 (Est.)	4.0	...	...	...
1950–51	...	...	...	...	...	...	...	44.0‡‡	2.73‡‡	...	...	...
1951–52	...	...	...	...	...	...	...	43.0‡‡ (Budget)	...	...	...	...

* At the rate of Rs. 6 per ton of cane. It was levied for the first time in 1947-48.

§ This represents the figure for the period ending September 30, *1949*, with the arrears *from* January 1, 1949. Separate figures for 1947-48 and 1948-49 are not available as the cess for the period was actually recovered in 1949-50.

(*a*) According to the Tariff Board, on the basis of figures received from the Cane Commissioners of U.P. and Bihar, the total proceeds of cess since 1938-39 to 1948-49 for a period of ten years amounted to Rs. 841.0 lakhs in the U.P. and Rs. 297.0 lakhs in Bihar. Of this amount the sum spent by the U.P. Government on cane development was Rs. 172 lakhs and by the *Bihar* Government was Rs. 144.0 lakhs. This works out to only 30 per cent of the total amount of cess collected by the Governments concerned (*vide* M. P. Gandhi's Sugar *Annual*, 1949).

† *Revised vide figures* supplied by the Indian Central Sugarcane Committee in their 1948-49 Report. The amount realised by the Government (*vide* letter No. 648 dated 15-4-51 from the Cane Commissioner, U.P.) was Rs. 78.1 lakhs in 1946-47; Rs. 185.3 lakhs in 1947-48; Rs. 298.78 lakhs in 1948-49; and Rs. 205.3 lakhs in 1949-50.

(*b*) *Vide* Estimate of the Tariff Board, 1950.

(*c*) The total cane cess for U.P. *and* Bihar *for* 1949-50 is estimated at Rs. 4 crores (*vide* Dy. Minister for Food in his speech on 12-1-51).

‡‡ *Vide* Bombay Budget for 1951-52. Rs. 2.73 lakhs were provided in 1950-51. No information is available for 1948-49 and 1949-50. *Vide* Finance Department Letter of 4-6-1951.

for the period commencing from January 1948 to March 1949 were actually recovered in 1949-50. The figures for the relative periods during the year 1947-48 and 1948-49 are not separately available yet. The figure for the period ending 30th September 1949, including as stated above, the arrears from 1st January 1948 was Rs. 41,80,609. The proceeds of the cess and fees recovered under the Act, the Bombay Act No. LXXII of 1948 are kept under a separate fund known as the "Provincial Sugarcane Cess Fund" and are proposed to be utilised in the manner indicated in Section 11 of the Bombay Sugarcane Cess Act, 1948. A provision for expenditure on extensive research scheme on sugarcane costing about Rs. 4.82 lakhs was made and it is learnt that nearly Rs. 4 lakhs have been accordingly spent. This expenditure works out to nearly 10 per cent of the total amount of Rs. 41 lakhs collected till 1949-50 for the period from 1st January 1948 to 31st March 1949. While the actual rate of the cess is to be decided by the Bombay Government from time to time, on the basis of the rate of cess at annas 3 per maund the income from cess for the year 1949-50 is expected to be about Rs. 50 lakhs on the basis of cane crushed to produce 1.1 lakh tons of sugar during the season. It is reported that the Government has decided to subsidise research on cane development to the extent of Rs. 2 lakhs only from this amount.

State-Aid to Research not adequate

From the very beginning Sugarcane research in India has been financed both by the Provincial and Central Governments. The Tariff Board of 1930, laid very great stress on the need for development and research and pointed out that without it the whole purpose of the scheme of protection was likely to be delayed, if not defeated. Indeed, they regarded research *as almost a condition precedent to protection.* The 1937 Tariff Board emphasized the urgency of the research work and stated, "we are convinced that the only hope of the industry *being able to compete on equal terms with other countries is a reduction in the cost of raw* material," and strongly recommended that the allotment from the excise fund should be raised from 1 anna to 3 annas per cwt. The Tariff Board of 1947 (on which the editor of this Annual, had the honour of being associated as Technical Adviser) also endorsed the recommendations of the Sugar Panel asking the Government to maintain the grant to the Indian Central Sugarcane Committee at 4 annas per cwt. On this basis, it was estimated that a grant of Rs. 50 lakhs would be made available every year to the Central Sugarcane Committee. It was a matter of gratification to us that the Tariff Board of 1947 endorsed the recommendations made in our previous *Annuals* for 1945-46 and 1946-47, both in respect of continuance of protection and increase in the grant to the Committee from 1 anna to 4 annas per cwt. Accordingly the increased grant was sanctioned for the year 1947-48 and preparations were afoot for launching short-term and long-term schemes for comprehensive research work calculated to achieve the object of reduction in the price of sugarcane which approximated to 60 per cent of the price of sugar.

In 1948-49, the grant was, however, again reduced from 4 annas to 1 anna of excise duty on sugar per cwt. and it fell to about Rs. 10 lakhs. Besides this annual grant, the Central Government also sanctioned a special grant of Rs. 125 lakhs. Of this, a sum of Rs. 50 lakhs was set aside for the erection of a suitable building at Lucknow for the Institute of Sugar Technology and the balance of Rs. 75 lakhs was allocated to the provinces for carrying out a five-year programme of development commencing from 1948-49, the Central Grant of Rs. 75 lakhs being supplemented by Rs. 133.19 lakhs by Provincial Grants. The total grant for the 5-year plan was Rs. 208 lakhs. Thus the average annual expenditure on development programme was estimated by the Tariff Board, 1950, at Rs. 42 lakhs. In our Memorandum submitted to the Tariff Board in October 1949, we invited the attention of the Tariff Board of 1950, to the necessity of recommending to the Government the allocation of a grant of not less than Rs. 50 lakhs per year for research work, both technological and agricultural. In this connection, we pointed out that the present position and superiority of the sugar industry in Java, Hawaii, Cuba, etc. have been due to the enormous amounts spent continuously for the purpose of research with a view to improving the efficiency of cultivation of cane and manufacture of sugar. The Tariff Board in their recommendations, it is gratifying for us to note, has endorsed our view and recommended that State Governments should contribute much larger sums from the collection of cess than they have hitherto done, because the benefit of research, the Tariff Board felt, will be mostly derived by the States.

In this connection it was pointed out by the Tariff Board that during the last 11 years, and in 1948-49, the U.P. and Bihar Governments had the following collection and expenditure : *(Figures are in Lakhs in Table C below)*.

TABLE NO. C

Collection from Cess and Expenditure on Research

—	U.P.		Bihar	
	In 11 years ending 1950	1948–49 (Estimate)	In 11 years ending 1950	1949–50 (Estimate)
Collection from cess ...	10,78	312	297	70
Expenditure on development & Research ...	1,72	37	145	13

The Tariff Board of 1950 thus observed, " We recommend that the Provincial Governments can and should contribute larger amounts for development work in their own areas. If, however, the Indian Central Sugarcane Committee can make out a case for larger grants, we recommend that the Central Government should favourably review the position and, if necessary, increase that grant from the Central Excise ".

We have already pointed out in the Section " Cane Cess and Cane Development " that the Provinces have so far spent only 30 per cent of the collection of the cess on cane development during the period of 10 years ending 1948-49. While on the basis of the figures given by the Tariff Board, 1950, the total expenditure on research in 11 years by U.P. comes to about 10 per cent and in Bihar 50 per cent of the amount collected, the balance of the amount being merged in State revenues. It is imperative that the cane cess should either be reduced or the States should be compelled to spend larger amounts for cane development and research.

Expenditure on Research must be increased

It will be evident from the adjoining Table No. D that the total expenditure for research has increased from Rs. 32,898 in 1944-45 to Rs. 11 lakhs in 1945-46 to Rs. 11.5 lakhs in 1946-47. It was Rs. 10.65 lakhs in 1947-48 and again increased to Rs. 31.25 in 1948-49 and went down to Rs. 26.25 lakhs in 1949-50 and was estimated to be Rs. 35.45 lakhs in 1950. In six years from 1944-45 only about Rs. 92 lakhs were spent on research which works out to an average of about Rs. 15.5 lakhs per year. *The land under sugarcane cultivation in India being about 37 lakh acres, the average expenditure per acre works out to approximately Re. 0-6-0 per acre only as against Rs. 12 per acre spent by Hawaii on research, Rs. 3 per acre by Java and Rs. 3 per acre by Japan. It is such enormous expenditure on research by foreign countries that accounts, among other things, for the superiority of the sugar industry in other countries.*

We are convinced that greater expenditure on research is vital, and feel that it is urgently necessary for the Government to consider the question of the increase in the grant to research so that schemes, both long-term and short-term, for reducing the cost of cultivation of cane and increasing the yield, do not suffer for want of money. This alone will help the industry to withstand the competition in due time from Indonesia, Cuba, Formosa, and Philippines, which are advantageously situated due to climatic, geographical and other considerations.

In this relation, we invite attention to Table 23 in the " Sugar Industry at A Glance " which shows the comparative yield of cane and sugar per acre in other countries. It will show the leeway which we have yet to make in this important matter. During the last 18 years, there had been little corresponding increase in the yield (*vide* Table No. 9 in the " Sugar Industry at a Glance ") even after the Coimbatore varieties were introduced three decades ago. The average yield of cane has remained almost stagnant at 14 tons to 15 tons since 1931-32 and there appears to be little possibility of improvement in this respect unless radical measures for research are immediately undertaken and adequately financed.

We have repeatedly stressed that *sugar is really produced in the fields and not in the factories* and as long as this fundamental fact is not

TABLE NO. D

*** Statement showing the Annual Expenditure of the Indian Central Sugarcane Committee from its normal Funds (1944-45 to 1950)**

Item	ACTUAL EXPENDITURE IN RUPEES INCURRED IN						
	1944–45	1945–46	1946–47	1947–48	1948–49	1949–50	1950 (Estimates)
A. Grants for Research							
1. Agricultural Schemes ...	...	2,85,645	3,06,597	3,86,268	4,29,760	6,97,617	7,84,971
2. Technological Schemes ...	...	42,185	41,788	72,106	69,971	89,427	1,25,250
B. Grants for Maintenance of Indian Institute of Sugar Technology ...	22,944	4,06,055	4,14,806	5,04,092	6,20,508	6,61,869	7,30,700
C. Grants for Subsidising Current Development Schemes ...	...	2,75,987	1,60,854	nil	nil	nil	nil
D. Administration of Indian Central Sugarcane Committee ...	9,954	93,219	96,403	98,194	1,48,024	1,55,883	1,89,700
E. Miscellaneous ...	...	nil	63,354	5,094	39,015	6,008	5,450
Total Expenditure from Normal Funds	32,898	11,03,091	10,83,802	10,65,754	13,07,278	16,10,804	18,36,071
Other Expenditure from Separate Grants							
1. Expenditure from Special Grant of Rs. 75 lakhs for 5-year development Scheme ...	...	...	68,977	...	7,50,642	10,14,336	12,93,246
2. Expenditure from Special Grant of Rs. 50 lakhs for the establishment of the Bhadruk Institutes ...	...	...	...	...	10,67,398	...	4,15,722
Grand Total	32,898	11,03,091	11,52,779	10,65,754	31,25,318	26,25,140	35,45,039

* *Vide* letter dated 18th August 1950 from the Indian Central Sugarcane Committee. Ref. No. F.90 (28) /49-3578.

properly recognised and translated into action by intensification of research and improvement in the yeild of cane per acre and its sucrose content which would result in higher recovery, it would be difficult to bring down the high price of sugar to a reasonable level.

Curtailment on Expenditure on Research, a False Economy

A glance at the Ministry of Agriculture, Government of India, publication, " Agricultural Situation in India ", for April 1949 (pp. 58-59) will show that the *per capita* expenditure on agriculture by the Central as well as Provincial Governments (agriculture being a Provincial subject) in 1949-50, was only Re. 0-1-6 (Central) and Re. 0-9-6 (Provincial), a total of Re. 0-11-0 per head on an average. This compares with Rs. 77 in the U.S.A. (1943-44), Rs. 20 in Canada (1943) and Rs. 2 in U.K. (1945-46). We draw the attention of the Government of India in regard to this point to show that the expenditure on agriculture generally has been negligible.

We feel that it would be reasonably expected of the Government of India to spend larger portions from the revenue of about Rs. 7 crores which annually accrue to them from the Excise Duty, for an overall improvement and efficiency of sugarcane cultivation, which can only be achieved at the earliest date by comprehensive research work, expenditure on which should be liberally allowed by the Government.

We strongly feel that it would be a false economy to curtail expenditure on research, particularly when we see that sugar industry in other countries of the world, namely Java, Cuba, Philippines, etc. has been able to achieve its present status only by comprehensive research work carried on effectively over a number of years at a cost of enormous expenditure.

We therefore urge with all the emphasis at our command upon the Government of India the necessity of carrying out research work of a practical character with a view to bring down the cost of production of sugarcane and sugar in the country, to lighten the burden on the consumers all over the country and assist the people to obtain larger quantities of sugar for their consumption, and thus help the industry to augment production of sugar to cater to the requirement of the people to the level of 13 lakh tons, as was estimated by the Tariff Board, 1950, for the next two to three years.

Like the former Minister for Agriculture, Shri Jairamdas Daulatram, who considered the high price of sugar a danger signal, we consider any curtailment in the Central grant of Re. 0-4-0 per cwt. (as given in 1947-48) for research work, a danger signal for the entire agricultural economy of the country. Besides, we see no reasonable argument for reversing the decision of increasing the grant arrived at only in 1947-48. True, there is financial stringency, but expenditure on research will pay several

times over, by results which will follow. We strongly urge the restoration of the grant, and pending that, a larger allocation.*

If the 5-year development plan as envisaged by the Central Sugarcane Committee is adequately financed and properly executed it is expected that significantly larger yields of cane and sugar per acre would be secured and the target of 16 lakh tons of sugar will be reached by the end of the next 5 years. The then President of the Indian Central Sugarcane Committee, Sardar Datar Singh, justifying the minimum requirement of the Committee for Rs. 47-48 lakhs per year for the expansion of its activities also pointed out that it was a reasonable sum in view of net receipts of Rs. 6 crores by the Government of India from Excise duty on sugar.

5-year Plan to increase Yield needs to be financed

If the 5-year scheme functions properly it is expected that it will go a long way in stepping up both the total production and the acre yields of sugarcane during the next five years. The State Governments, it is reported, also appreciate that the average acre yield of cane, as a result of this development, would increase to the following extent and with the target stated above being achieved the prices of cane and sugar will automatically go down.

TABLE NO. E

† Targets of Yields

State	† Present Average Yield per acre (Tons)	Expected Acre Yield at the end of development scheme period (Tons)	Percentage of increased yield
1. U.P. ...	12.5	25	100%
2. Bihar ...	12.0	20	66%
3. W. Bengal ...	18.0	22.5	25%
4. E. Punjab ...	12.5	18.0	40%
5. Bombay ...	40.0	44.0	10%
6. Madras ...	25.0	30.0	20%

Success of Research should be measured in terms of Increase in Yield

We have been emphasizing the need of carrying on research from the laboratory to the cultivator in the field and the manufacturer in the factory, if it is at all to be useful. Delivering his presidential address at the Seventh International Technologists' Congress held in Queensland

* We regret to learn that due to financial stringency, the Government of India have postponed payment of the sum of Re. 0-1-0 from the excise duty on sugar, to the Indian Central Sugarcane Committee, in 1950-51. They have suggested that meanwhile the Committee should spend the money required for research, from their accumulated funds. We are glad, however, that the Government have extended the assurance that when the Committee needs funds, they will make grants to meet the expenditure. We hope this position will not continue for long.

† The present average yield of India as a whole is only 14 tons.

in September 1950, Dr. Pieter Honig observed that the sugar industry throughout the world was faced with a specific problem of putting into practice all the knowledge that had been gained. The present knowledge was applied only partially. *Not even 20 per cent of the world's 12 million acres of sugarcane was being properly fertilised, and less than 10 per cent was being irrigated, while the selection of treatment of seed cane for good germination and application of modern fungicides applied to less than 5 per cent of the world's cane acreage.*

It is pertinent to note the further observations of Dr. P. Honig when he says that since 1938, sugar production has increased in the Western Hemisphere, especially in Africa, but declined in Asia. This is applicable to India. It is gratifying to note that the paramount need for practical application of the laboratory research was stressed as early as February 1949 by the then Food Minister, Shri Jairamdas Daulatram, while inaugurating the meeting of the Indian Central Sugarcane Committee when he advised the Committee to " switch on its activities more and more from the laboratory to the fields and to set up some quick-moving machinery to bring to the farm of the cultivator the results of patient research conducted at various centres. He even went to the extent of suggesting the appointment of a development committee which would tour the sugarcane areas at the appropriate time and by continuous contact at close quarters with the problems of increased production from the same area help the growers of sugarcane to reap due benefit from the research work in progress."

This was a very helpful suggestion requiring immediate implementation for achieving the desired results from the research in the laboratory in the form of increased yield per acre. So also the Tariff Board in 1950 seemed to be convinced of the principle underlying the idea of the practical application of research. It suggested the criterion for judging the success of research work done in terms of reduced price of cane and increased yield, when it observed : " To ensure definite progress towards increase in the yield of cane and consequent reduction in its cost and price in a period of four or five years, it is necessary that the success of various research and development programmes undertaken by the Central and Provincial Government, should be measured in future only in terms of a reduction in the price of cane consequent on the increase in yield and improvement in quality."

Cane Prices and Cane Cess in U.P. for the 1949-50 Season

The cane price for 1949-50 season in U.P. was Re. 1-10-0 per maund exclusive of the cess at the rate of 3 annas per maund. The total income from cess during the financial year 1949-50, according to official figures, amounted to Rs. 2,14,04,400. The proceeds from cess were, as usual, merged in Provincial revenues and no portion was earmarked for any specific purpose, according to the letter No. 17-S/XVIIIC-214/1950, dated 13-12-1950, from the Under-Secretary to the Government, U.P., Industries and Excise Department, to the Sugar Commissioner, U.P. and Bihar.

With a view to offering an inducement for maximisation of production of sugar and in order to encourage the factories, which assisted in the realisation of this objective, Government had originally decided to allow a rebate of 9 pies per maund of sugarcane on cess payable in respect of sugar produced by sugar factories in excess of the 1948-49 season's production by more than 5 per cent. The rebate was to be allowed on the condition that the factories situated in Meerut, Rohilkhand and Central Ranges started crushing of sugarcane not later than November 25, 1949, and those in Mid-Eastern and Eastern Ranges not later than December 10, 1949. Soon after the commencement of the crushing operations by sugar factories for the 1949-50 season, Government held informal discussions with the Board of Directors of the Indian Sugar Syndicate Ltd., on the problems and prospects of the sugar industry and in particular, the difficulties of the Eastern district factories. It was felt that there was great need for maximum possible production of sugar, particularly because there was no carry-over from the previous season. This object, it was thought, could be achieved only when the industry was allowed some concession. Government, therefore, agreed to allow rebate on extra crush to the extent of 50 per cent of cess (at Re. 0-1-6 per maund) in the case of sugar factories situated in Meerut, Rohilkhand and Central Ranges and total remission of cess on extra crush to sugar factories in the Eastern and Mid-Eastern Ranges. Government also decided that the 50 per cent cess collected on extra crush from sugar factories in Meerut, Rohilkhand and Central Ranges should be distributed as a subsidy to factories in the Eastern and Mid-Eastern Ranges. This subsidy was to be distributed rateably on the production maundage of each factory in the 1949-50 crushing season irrespective of whether or not it crushed any quantity in excess of the previous season.

The above rebate was not paid to the factories till the end of 1950. According to reports received by the State Government, U.P., 32 factories were able to crush extra quantity of cane. The total extra crush is estimated to be about 1,29,64,000 maunds of sugarcane. Thus the total rebate to be allowed to factories concerned would be in the neighbourhood of Rs. 24,30,800.

Total Cane Cess in U.P. in the 1949-50 Season

Though according to official figures, the income from cane cess which was levied at the uniform rate of 3 annas per maund, throughout the season from the very commencement of the crushing season, was Rs. 2,14,04,400, yet on the basis of the total crush of 14,36,56,000 maunds, it is estimated to be Rs. 2,69,35,500. The income from cess during the financial year 1948-49 was, according to official figures, Rs. 2,98,78,688. As stated above, the entire proceeds from the cess were, as usual, merged in the State revenues, and no portion was earmarked for specific scheme. The State Government, however, incurred the following expenditure from general revenues on the development of cane and other allied schemes :

TABLE No. F

Expenditure on Cane Development in U.P. (1948-49 and 1949-50)

Item	1948-49	1949-50
1. Cane Development	36,81,600	40,42,100
2. Reservation and Bending of Sugarcane ...	49,400	39,900
3. Expenditure on Staff for Administration of U.P. Sugar Factories Control Act and Rules	16,000	20,500
4. Sugar Commission	35,300	41,000
Total ...	37,82,000	41,43,500

Vide Letter No. S-7462-XXIXA dated 13-12-50 from the Under-Secretary to the U.P. Government to the Sugar Commissioner, U.P. and Bihar, Kanpur.

CHAPTER 7

UTILIZATION OF BY-PRODUCTS OF SUGAR INDUSTRY

Government's interest in 1949-50 in Utilization of By-products

The Government of India, during the year under review, showed keen interest in the implementation of the Tariff Board's recommendation on utilization of by-products of sugar industry.

The Government asked the Indian Sugar Mills' Association to examine the various recommendations made by the Tariff Board (1950) in paragraph 68 (b) of their report and to suggest as to what action could be taken to bring this into practice. The Government also wanted to be informed as to whether any of the factories had given effect to these recommendations in the past.

Tariff Board's Recommendations

Paragraph 68 (b) of the Tariff Board Report read as follows :—

> " Other directions in which cane-trash can be profitably used are (i) hydrolysis of the cellulosic material in cane-trash and its conversion into alcohol; (ii) manufacture of decolourising carbon; and (iii) manufacture of paper. It is understood that the Walchandnagar Industries Ltd. have recently installed a plant, the first of its kind in the country, for the manufacture of paper from cane-trash. The sugar industry should develop such by-products and where necessary, take the technical advice and assistance of the Council of Scientific and Industrial Research and the Indian Institute of Sugar Technology."

The other recommendations of the Tariff Board of 1950 in this respect were :—

"There is a possibility of commercial extraction of cane-wax from press-mud which, after refining, gives a product comparable to imported cannarauba wax, used in the manufacture of boot polish.

The manufacture of acetic acid and particularly glacial acetic acid from molasses has possibilities in view of the development of the Indian firms and rubber industries."

NEW USES OF BY-PRODUCTS OF SUGAR FACTORIES

(1) Wrapping Paper from Bagasse

The practical possibilities of the utilization of bagasse in the manufacture of kraft paper for wrapping purposes and for use in multi-wall bags as substitute for jute bags were recently investigated at the Forest Research Institute, Dehra Dun. The results of this research are given in the Indian Forest Bulletin No. 148—1949.

Bagasse, a fibrous material which results from the crushing of sugar-cane, is at present mostly used as fuel for boilers in sugar mills. If alternate fuel—that is, coal were made available to sugar mills, huge quantities of bagasse could be released for the wrapping paper industry in India.

India has at present more than 165 sugar factories with a total crushing capacity of about 85,000 tons per day. On an average, these work for 100 days in a year, crushing about 11 million tons of cane. The crushed cane yields approximately 32-33 per cent bagasse. It is estimated that if about three million tons of coal were made available as fuel to sugar factories, it would release more than 3 million tons of bagasse for utilization in the paper and other cellulosic industries. It, therefore, seems an attractive proposition, to establish paper mills in close vicinity of sugar factories.

The wrapping paper industry in India is still in its infancy. It was only in 1940 that production of kraft paper was started by two mills. Of these, one stopped manufacturing in 1942 and the production of the other averaged 25-30 tons per day, equivalent to 7,500-9,000 tons per annum. As against this, the Paper Panel appointed by the Government of India in 1946 estimated that India's annual requirements of wrapping paper were likely to be 80,000 tons by 1951 and 100,000 tons by 1956. The sugar industry alone is estimated to require well over 12 million bags per year and the cement industry needs approximately twice that number.

We have been urging that science and research should be mobilized for exploitation of bagasse for industrial purposes and it is gratifying to

read in the bulletin the results of laboratory and pilot plant tests on bagasse as a source of paper. It says :

> "Bagasse pulp in admixture with other long fibre pulps, with or without a bonding medium such as tamarind seed pectin, yields suitable paper for multi-wall paper bags. With bagasse as the principal raw material strong packing papers can be produced at economic cost."

(2) Compost from Press-Mud and Cane-Trash

As a result of experiments carried out over a number of years at the Indian Institute of Sugar Technology, it has been possible to standardise the method for the manufacture of compost from sugar factory by-products in the factory premises.

An idea of the large quantity of compost that can be prepared for the benefit of the Indian agriculturist can be gauged from the figures given below (Table No. A) which show the quantities of cane-trash and filter press cake which may on an average be available in sulphitation sugar factories.

TABLE NO. A

	U.P.	Bihar.	India.
	Tons	Tons	Tons
Cane Trash	57,500	23,000	98,000
Filter Press Cake	142,750	57,000	245,000
Dry matter in Cake	57,500	23,000	98,000

It is well known that press-mud, besides containing valuable Nitrogen and organic matter, contains appreciable quantities of phosphates and Potash, and compost prepared from this material will also contain these ingredients.

The process consists of mixing one part of cane-trash with three parts of dry press-mud or six parts of wet press-mud by weight, which is made into a heap. This mixture will contain approximately one per cent of Nitrogen and the C : N ratio will be about 30 : 1. To this heap is further added molasses and cowdung each 2 parts per 100 parts of the heap by weight in the form of a slurry made with water. The whole mass is then mixed up so as to make it sufficiently moist. The mass is again

made into a heap on level ground (not in a pit). The moistened heap should be kept on level ground for a period of 8 to 10 days so as to allow it to undergo aerobic fermentation. During this period, a rise in temperature takes place, which may go upto 60° or 65°C. After ten days the moist heap is transferred into *kachha* pits of *sufficient* size and the material is tightly packed therein. The heap is then covered with a layer of mud paste and allowed to remain there for a period of 6 to 8 months. During this period, *anaerobic* fermentation goes on, and complete disintegration of the material takes place. When the material is found to be of a powdery structure and a greyish black appearance the compost is considered to be ready. The pits are then opened and the compost taken out and is ready for use. On an average such compost is found to contain about 1.5 per cent of nitrogen.

Cropping experiments carried out at the Agriculture College, Kanpur, have shown that the average yield of sugarcane increased from 800 mds. to 1,015 mds. (about 25 per cent extra yield) with application of 90 mds. of this compost per acre over the basal dressing of 15 cart loads of farm yard manure per acre. (The control experiment which gave the yields of 800 mds. per acre also received a basal dressing of 15 cart loads of farm yard manure.) *It is estimated that the cost of labour for producing this compost would not exceed 3 annas per 100 lbs. of the compost or annas 2 per lb. of Nitrogen. The cost of the raw material will be small.*

The other advantage of manufacturing such a compost is that it can be prepared in an organised manner in sugar factory premises and can be transported to the fields in the carts which return empty after unloading the cane. Alternatively the cultivator can himself prepare the compost by taking the required quantities of press-mud and molasses from the factory in his empty cart and utilising the cane trash available in his field. Further, such a compost will definitely be better than other organic manures as it will also contain, besides nitrogen, appreciable quantities of Potash and Phosphates.

(3) Molasses and its utility for Power Alcohol manufacture

It is the most important by-product of the sugar industry. It is mainly utilised in India for the manufacture of alcohol and tobacco curing. In India about a dozen distilleries are making use of it for the production of alcohol. Efforts to manufacture Butyl Alcohol and Acetone from molasses are reported to be a success.

The following Table will show at a glance the by-products of the sugar industry in India with their utility :—

TABLE NO. B

By-Products of Sugar Industry

By-Products	Average Production on Cane	How utilised
1. Cane Trash	10 per cent	Paper Board & Packing
2. Bagasse	32–33 per cent	1. Cattle feed 2. Straw Board and paper 3. Activated carbon 4. Manufacture of cellulose
4. Press Mud	2–3 per cent	1. Fuel 2. Manufre and fertiliser 3. Cane wax (from sulfitation press mud) 4. Dye Stuff and filter aid 5. Metal polish and chalk
5. Molasses	35 per cent	1. Ethyl alcohol 2. Butyl alcohol 3. Tobacco curing 4. Cattle feed 5. Manure 6. Fuel 7. Lactic acid 8. Food yeast

Production of Molasses in India and Recovery % Cane

The total production of molasses in India in 1946-47 was 399,000 tons, in 1947-48 was 477,000 tons and in 1948-49 was 446,000 tons. Major portion of the molasses was from cane factories, 318,000 tons in 1946-47, 411,000 tons in 1947-48 and 369,000 tons in 1948-49. The total production of molasses in 1949-50 was 448,000 tons. The following figures (Table No. C) will show the recovery of the molasses per cent cane.

TABLE NO. C

	U.P.	Bihar	Rest of India	India
1946–47	3.32	3.31	3.98	3.49
1947–48	3.65	3.40	4.17	3.76
1948–49	3.48	3.53	4.13	3.68
1949–50	3.48	3.52	4.00	3.60

According to the information received by us from the Commissioner of Excise, Bihar, the controlled ex-factory price of molasses in 1948 was 4 as. and 8 as. in North and South Bihar sugar factories. Ninety per cent of the total production of the Bihar factories was as usual requisitioned by the Government for the manufacture of country spirit and rectified spirit and 10 per cent was left for gate sale by the sugar factories at controlled rate, to the dealer selected by the factories themselves. In 1948, nearly 130,000 maunds of molasses were supplied to West Bengal for distillation purposes from Government requisitioned stocks. Some quantity of molasses from Government requisitioned stocks was also supplied to the Hukka tobacco manufacturers through the Central Excise Department. There were according to information supplied to us by the Commissioner of Excise, Bihar, on August 4, 1950, only two factories in Bihar manufacturing alcohol in 1949-50. The total capacity of these two factories was 4,500 gallons per day. Considerable difficulty was encountered by the U.P. factories in starting sugar production for the 1950-51 season owing to the accumulation of the stocks of molasses in the factory areas.

Power Alcohol Industry in India

In our 1949 *Annual* we had given an exhaustive note on the subject. There are at present 15 units producing power alcohol. Out of this, 11 are in U.P. which has introduced a mixture of power alcohol and petrol for automobile purposes. Some other units are also producing potable liquors and industrial alcohol. Power alcohol was stated to have been used in Mysore for a long time for agricultural tractors and other vehicles including railway diesel engines. The capital invested in power alcohol manufacture is estimated to be Rs. 130 lakhs and the number of workers employed to be about 1,400. The progress of the industry has been hampered by State restrictions on inter-State movement and marketing and price. At a meeting of the Planning Commission held in New Delhi in February 1951, attention of the Commission was drawn to the difficulties encountered by the industry. There was a general agreement reached for development of the industry with a view to make the country less dependent on foreign sources for an all important fuel, especially in the present international circumstances.

According to the statement of Mr. Hare Krushna Mahatab in Parliament, the production of power alcohol in India in 1950 was 44,97,333 gallons as against 42,29,959 gallons in 1949 and 37,76,335 gallons in 1948.

Power Alcohol Production in 1949-50

During the year under review, considerable difficulty was encountered in starting the cane-crushing season in the factories especially in the U.P. and Bihar owing to the accumulation of molasses. Bihar molasses, according to reports, amounted to 60,000 tons which could have yielded about 30 lakhs gallons of power alcohol. There are about 15 power alcohol plants in U.P. and Bihar. The production target for U.P. for 1949-50 was 75 lakhs gallons of power alcohol and the actual production

during the period was only 30 lakhs gallons. The power alcohol units demanded in 1948-49 a higher price and the U.P. Government granted an increase of 3 annas per gallon which in many instances, is just sufficient to meet the manufacturing cost.

Target for Power Alcohol Production in 1950-55

In November 1949, the Government of India fixed provisional targets for production in 1950 for several industries including Sugar, Power Alcohol, Molasses, etc. The target fixed for sugar in 1950 was 12 lakh tons, the installed capacity being considered to be 14 lakh tons. In the case of power alcohol, the target for 1950 was 10 million gallons, the present installed capacity being equivalent for production of the quantity. The production of power alcohol needs speeding up to the target of 23 million gallons fixed at the end of 1955, thus consuming about 3.91 lakh tons of molasses.

CHAPTER 8

DEVELOPMENT OF PALM GUR INDUSTRY IN INDIA

Need to develop Palm Gur Industry

The population in the country seems to be increasing rapidly and perhaps much faster than the rate of food production. The time, it is feared, may not be far off, when it may become absolutely necessary to devote to culture of wheat and rice the lands now employed for sugarcane production ! ! The only alternative under the circumstances to make sugar available to the people is to begin to develop palm gur industry. It is estimated that to release one acre of fertile land for food production now occupied by cane, it is enough to tap 50 palms, which flourish on waste-lands, hillocks and bunds of fields, neither requiring irrigation, nor manuring nor watering. A long-range view of agricultural planning brings palm, a tree of wealth and desires, as it is rightly called, into the picture. Though the cost of production of gur or sugar from palm does not compare favourably with that of sugar from sugarcane or sugarcane itself owing to the high cost of tapping, yet it is not to be forgotten that palm gur industry is essentially a village industry and stands for decentralisation.

Economics of Palm Gur manufacture

Palm trees unlike sugarcane live for many years and yield juice for 30 to 50 years. We have not to destroy the palm in getting sugar from it, nor does the collection of sap destroy the tree. While sugarcane requires the soil that is fit for the production of cereals, the palms can prosper on soils entirely unfit for cereals. It is noteworthy that date-

palm gur contains 72.01 per cent sucrose as against 59.71 in cane gur. The daily per tree collection of juice is from 4 lbs. to 10 lbs.

According to the estimates by the Tariff Board, 1950, we have in India 5 crores of palms which yield a million tons of gur. They are India's perpetual wealth. It is therefore gratifying to note that our Government have taken the right step since 1947-48 to resucitate the manufacture of gur from palm nira. Palm yields about 6,000 lbs. of sugar per acre while the yield from sugarcane per acre is only about half that quantity. To replace one acre of fertile land, it is enough to tap 50 palms.

Government takes interest in Palm Gur Industry

The Government of India have been taking keen interest as such in the development of palm gur and palm gur industry in the country. They sanctioned Rs. 1.4 lakhs for development of the industry in 1947-48. The All-India Palm Gur Workers' Conference held at Najibabad, U.P., from March 12 to 15, 1950, sought to justify the Government aid, as large-scale improvement in palm sugar, palm sugar products, palm gur and new and more economical methods of tapping were observed.

According to the official note of the Ministry of Agriculture published in full in our 1949 *Annual*, it is estimated that proper exploitation of the five crores of palm in India on a cottage industry basis will provide at least a part-time work for 5 million tapper families and many hundreds of potters and smiths who will be required to supply juice collecting pots and tapping tools. In our 1947-48 *Annual* we had given an official note describing the species of palm, namely date palm, sago, etc., and outlined the possibilities of gur from palm.

Early History and Statistics of Palm Gur Industry

If the past record of an industry is any indication of the possibility of its revival, the following few statistics about the Palm Gur Industry will be found very revealing :—

The Agricultural Journal of India, 1911, page 282, reports that " when the total production of sugarcane sugar was reckoned at 366,600 tons, 64,230 tons were produced from the palms. The former was valued at about 5,000,000 pounds and the latter quantity at 1,000,000 pounds. Thus, the latter was about 17 per cent of the former ". (Notes on sugar in India, 1911, by Noel Paton, Director-General of Commercial Intelligence.)

Mr. Noel Paton put the annual yield of palm jaggery at 480,000 tons, when the total jaggery production in India was put at 3,000,000 tons. Thus, the jaggery production from the palms was also about 70 per cent of the total national production.

In 1848, refined date sugar production was 15,000 tons of which two-thirds was exported from Calcutta to the English markets.

" Date sugar has always been a favourite luxury with the native population (in Bengal). Its production is preferred in its own districts

to that of cane sugar owing to the more expensive and precarious cultivation of the sugarcane." (Memoirs of the Department of Agriculture, India, Volume 11, No. 6, March 1913, H. E. Annett.)

The average exports of sugar in 1847-48 were 60,000 tons of which a substantial proportion is said to have been date-sugar.

"Production of refined date sugar during the years 1854-58, is said to have averaged 35,000 tons which is equivalent to 88,000 tons of gur. So great and steady an increase in date sugar production is sufficient evidence of its value as a remunerative cottage industry." (H. E. Annett.)

In 1888 ("Statistics of Sugar Plants and Sugar, Department of Agriculture, Bengal"), Bengal, (presumably including Eastern Bengal), is again said to have produced 743,000 maunds of date-gur. This is about 27,000 tons. Thereafter, the more recent figures go to show that the industry has been declining.

In 1889, a careful Government enquiry showed that 168,262 acres were under palms connected with sugar supply.

In Madras, a single refining firm in 1900 bought Rs. 1,500,000 worth of jaggery at Rs. 4 per maund which would be roughly 16,000 tons and in 1908-11, an average of 27,000 tons per annum.

In 1906-11, the average number of palms tapped for sugar-making in Godavari, Kistna, South-Kanara, Malabar and Tinnevelly districts of Madras alone was over 20 lakhs annually.

From the bove figures, it would appear that the industry had assumed important proportions in the latter half of the last century.

Present Position and Future Prospects

As regards the future possibilities of the Palm Gur Industry, the palms have sometimes been considered to be the only rational source of sugar production by some Agricultural Scientists for the following reasons: —

Palm juice as a raw material for the manufacture of sugar offers many exceptional advantages.

First, the annual cost of cultivation attending the raising of sugarcane crops, is eliminated. Rich land blocked under sugarcane cultivation could be released for production of essential cereals. Over 60 per cent of the land under sugarcane is said to be irrigated, whereas, the palms flourish on inhospitable and barren soil, almost unfit for any cereal cultivation. The palms continue to yield saccharine juice for 60 to 70 years. With a little attention and care, the palm may become a perennial sugar producer.

Secondly, the expensive crushing machinery which is an essential part of every cane-gur manufacturing enterprise, can be eliminated in the case of Palm Gur manufacture.

Thirdly, since the juice is said to be comparatively free from Chlorophyllic and other pigments, the process of clarification is considerably simplified.

Fourthly, the juice is said to be free from sucrose inverting Enzymes which minimise the formation of molasses.

Though the existing number of palms has so far commonly been estimated at over 5 crores, the latest statistics available about the number of tappable sugar palms growing in the State of Madras alone is 66,063,445 (Table compiled from reports of Madras District Collectors by the State Palm Gur Organiser, C/o Registrar of Co-operative Societies, Chepauk, Madras). If this entire existing wealth could be utilised for gur production, the present national gur production would be augmented by about one and a half million tons of sugar. This would be equivalent to cane-gur production of about 600,000 acres of fertile and largely irrigated land, which in its turn, can help grow some 9,000,000 maunds of paddy, annually. If an adequate number of palms were to be planted now, on their maturing in a period of about 10 to 15 years, the entire annual gur needs of the country amounting to about 3,500,000 tons could be met from the palm juice alone.

It appears that want of State, scientific or technological assistance and guidance, has contributed more than other causes to the decline of this industry. The sugarcane gur producing industry has enjoyed the above and many more facilities, concessions and aids. Otherwise, as it is, the labour and expenditure involved in obtaining the sweet juice of the palms, is comparatively much less than in the case of sugarcane juice. The labour involved in climbing the palm up and down, has been considerably reduced by the adoption of the Aerial Ropeways system in which the palms are connected by ropeways at their tops and by means of which the tapper having climbed one palm only, can walk across to another and a third and so on. He can, thus, tap nearly double the number of palms which he is able to do at present without this device.

As regards the fuel required for boiling down the juice into gur, light jungle-wood fuel, though available in required quantities in many tracts in our country, is nevertheless getting scarce in some other parts. In the latter places, soft coke has replaced the usual jungle twigs, dry leaves, etc., commonly used as fuel in the countryside. The soft coke supply position is said to be easy at present.

The improved scientific type of furnace for boiling the juice, which has been introduced in all the States in India, has reduced fuel consumption by about 50 per cent of the figure for the old type furnace. The flat-bottomed iron pan used for boiling the juice in has replaced the old earthen round-bottomed deep vessels. This improvement has led to a remarkable improvement in the quality and colour of the gur produced and to not a little saving in the boiling time. Research in the use of shellac for internal coating of the earthen juice collecting pots to render

them impervious to juice, in the clarification, preservation, transportability of gur, etc. is still progressing. Success has been achieved in the use of Solar Heat in place of fuel for solidifying the juice into gur on a laboratory scale.

* Neera—a new avenue of Employment

To make this occupation more economic, sale of Nira, the fresh sweet palm juice as a beverage, is being popularised. Like milk, Nira need not be boiled down into solid products, if it could be sold as a liquid drink, wherever possible. Any Nira unsold as such, may then be converted into gur, sugar, sweets, etc. In the initial stages of the Nira selling campaign, specially in the areas where prohibition has been introduced, it is undeniable that a fairly strict supervision and precautions by the Excise Department will have to be taken to guard against its misuse. Sale of Nira in its liquid state will help reduce the consumption of fuel considerably. Saving of fuel costs, which is the biggest single item in the cost of production of Palm Gur, will correspondingly add to the income of a tapper.

The Bombay State Government had 149 Nira vending stalls in the cities and towns during the year 1949-50, where 1,410,625 lbs., out of a total production of 1,671,088 lbs. of Nira, were sold as a drink, valued at Rs. 350,461-11-9. The other States Governments in India are also taking a lesson from the successful experiments of Nira sales depots of Bombay Government and are opening such Nira vending stalls on an experimental basis.

To supply to the above 149 Nira sales depots of Bombay Government, 293 tappers were employed at the Nira extraction centres. Almost all of them were ex-toddy tappers. The strength of the non-tapper staff employed in the scheme was 257. Thus, it will be seen that Nira selling is proving a new avenue of employment for the ex-toddy tapper and the rural-service-minded intelligentsia.

White crystal sugar can also be made on a cottage basis from the palm juice directly. The juice is boiled to a thick honey-consistency syrup, popularly called "Rab", keeping the syrup undisturbed for a few days to allow crystallisation to take place and then passing it through a small hand-driven centrifugal machine for separating the crystals from the liquid molasses. This machine costs about Rs. 250 only. It is capable of centrifuging two maunds of rab in about 8 hours. A man or woman of normal strength can work it. First molasses can be subjected to the same process once or twice again, depending on its sugar content. The total extraction of sugar on juice in this process does not exceed about 5½ per cent.

* Pure Nira, according to the late Mahatma Gandhi, is food even as sugar. Pure Nira turned into gur, he observed, could compete with ordinary gur.

Palm Jaggery *

The present average annual production of palm jaggery is reported to be in the neighbourhood of 50,000 tons. Of this, nearly 30,000 tons are produced by about 120,000 registered and licensed members of (ex-toddy tapper) jaggery makers' co-operative societies in the State of Madras alone. The number of these societies is about 1,600.

Except some districts of Madras where the palms are found growing in thick clusters, which almost seem like palm forests, the scattered and irregular nature of the growth of the palm in other parts of India renders it compulsorily an industry practicable on a cottage-scale only. It is incapable of lending itself to exploitation on a large-scale centralised basis, as adequately large quantities of juice cannot possibly be collected in a central place. It may be possible to do so, if regular plantation of the palm is undertaken.

Exploitation of the palm for gur, etc. and its parts such as,the leaves, stalks, stem, trunk, etc. is the easiest and the cheapest alternative occupation that can be offered to the ex-toddy tapper who is increasingly being rendered unemployed as a consequence of the introduction of prohibition. He is already conversant with the tapping process and with a training in gur-making, a subsidy in the form of necessary equipment and some assistance in marketing the products in the initial stages, he would soon be able to look after himself economically.

The States of Madras, Bombay, Bengal, Bihar, Uttar Pradesh, East Punjab, Hyderabad, Mysore, Travancore-Cochin, Madhya Bharat, Rajasthan, Saurashtra, Bhopal, Coorg, Delhi, Ajmer and Andamans are developing the Palm Gur Industry through departments specially opened by them for the purpose. The Governments of Orissa and Madhya Pradesh also implemented Palm Gur Development Schemes during 1949-50. The Madhya Pradesh Government is continuing the work departmentally.

With the economies of large-scale production of white factory sugar, increasing urbanization of tastes, larger capital resources and better interest by the State in the cane-gur and sugar production, it is doubtful whether it will be possible to universalise production of Palm Gur and make it take the place of sugarcane-gur unless the State extends adequate financial and other assistance for a sufficiently long period so that this apparent waste may establish itself as a source of wealth in the popular conception of things.

---

* Palm gur, according to Mahatma Gandhi, is even more tasty than sugarcane gur.

Note: There are four varieties of sugar yielding palms in India: Palmyra, Date, Cocoanut, and Sago. Palm jaggery is manufactured from fresh and sweet juice of these four palms. It is improper to call gur prepared from the fresh juice which is called tod-gur as toddy-gur.

Government Concessions to Palm Gur Industry (1950-51)

The Government of India have given a proof of their solicitude for this industry by exempting palmyra jaggery from the purview of the Sugar and Gur Control Order, 1950. This will enable palmyra jaggery to be sold at prices higher than those fixed for cane gur, at Rs. 19 per maund.

CHAPTER 9

IMPORTS AND EXPORTS OF SUGAR IN INDIA

Expenditure on Sugar Imports since 1914-15 onwards

It will be seen from Table 1 in "The Sugar Industry at a Glance" that as a result of the development of the Indian sugar industry in the country under a protective policy, sugar imports have practically stopped since 1942-43. The annual imports before the period of protection were of the order of 500,000 tons to 600,000 tons on an average since 1914-15 to 1930-31. The imports in 1931-32 were of over 500,000 tons of the total value of about Rs. 6 crores, that in 1932-33 of the order of about 389,000 tons of the value of Rs. 4 crores. The total value of imports of sugar in 1933-34 was Rs. 2.7 crores, in 1934-35 of Rs. 2.1 crores, in 1935-36 of Rs. 1.9 crores, in 1936-37 of Rs. 20 lakhs, in 1937-38 of Rs. 20 lakhs, in 1938-39 of Rs. 40 lakhs, in 1939-40 of Rs. 3.2 crores. Negligible expense had been incurred on imports of sugar till it was nil for some years after 1942-43, especially in the years 1945-46 and 1946-47. The average value of imports of sugar annually was Rs. 15 crores during the period 1914-15 to 1930-31, while it was Rs. 2.5 crores per annum during the period 1931-32 to 1941-42.

Imports of Sugar in 1949-50

The Government of India in order to make up the deficit of about a lakh of tons in the sugar production in the country in 1949-50 purchased 60,050 tons of the U.K. and U.S.A. sugar for import into the country. Out of the total quantity purchased only 5,550 tons were reported to have reached India in 1949-50 before November 1950. The balance was imported into the country in 1951. Out of the total quantity purchased 28,000 tons were reported to have reached before February 1951. It was announced by the Deputy Minister for Food in February 1951 that the Government of India had no intention of importing more sugar in 1951, except the balance of 32,050 tons.

Estimated Cost of 60,050 tons purchased works out to Rs. 4.3 crores

The Government of India purchased sugar at varying rates and in different quantities from the U.K. and U.S.A. From the U.K. they purchased 60,000 tons, at £56 to £62 per ton and from U.S.A. 50 tons

at $6.5 per 100 lbs. The estimated cost of the total sugar purchased was about Rs. 43,235,840 and that of 5,550 tons imported out of it in 1949-50 before November 1950 was about Rs. 40 lakhs.

Imports of Sugar prove costly

The President of the Tariff Board of 1949 in his opening remarks at the Sugar Conference held in Bombay on November 28, 1949, suggested that imports of sugar of about 50,000 tons could be made from any of the four countries, namely, Formosa, Poland, Soviet Russia or Cuba at an estimated cost of Rs. 2½ crores to Rs. 3 crores. In our 1949 *Annual*, we strongly protested against any measures of import of sugar, as India with her sugar industry having an installed capacity of 14 lakh tons was able to manufacture enough sugar to meet the home demand of 10.5 lakh tons to 13 lakh tons annually, unless there was some unforeseen emergency compelling us to import sugar at the cost of valuable foreign exchange.

The proposal for import of sugar again cropped up in July 1950, when the Government of India emphasized the shortage of sugar and proposed to import about one lakh tons of sugar during the next twelve months ending June 1951, in apprehension of the fall of production in sugar below the anticipated target of 11 lakh tons, in spite of revenue concessions in excise duty offered at the instance of the then Deputy Minister, the late Sardar Vallabhbhai Patel. With effect from 24th June 1950, Government prohibited the export of sugar, gur (cane and palmyra jaggery) to conserve our supplies. The Government of India negotiated with foreign countries for purchase of sugar through embassies, and enquiries were made for getting stocks at once. The Indonesian authorities had already observed in March 1950 that there would be no possibility of getting sugar from Java. By July end, 1950, however, Mr. D. Y. Dev, the then Commissioner for India in Mauritius reported the possibility of imports from Mauritius, as it was expecting to have a record crop of 4.5 lakh tons. This possibility, however, did not materialise as the entire surplus production of sugar in Mauritius was committed to be sold to the U.K. Ministry of Food. In November 1950, the Hon'ble Minister for Food and Agriculture, Mr. K. M. Munshi, in reply to a question in Parliament reported that as against 60,050 tons of sugar purchased by the Government of India from the U.K. (60,000 tons) and from the U.S.A. (50 tons), 5,550 tons of the estimated value of about Rs. 40 lakhs had arrived in 1950 and by February 12, 1951, the total unshipped quantity was only 40,000 tons.

The purchase of sugar from the U.K. was effected at rates varying from £56 to £62 per ton while the rate from U.S.A. was $6.5 per 100 lbs. It was reported that it was possible for the U.K. to spare 15,000 tons out of this quantity to India as the U.S.A. had released an equivalent quantity of raw sugar for the U.K. from its stocks. During the discussion in Parliament (Indian) in October 1950, it was stated that sugar was available before the outbreak of Korean hostilities at a price of

Rs. 652 per metric ton f.o.b., Bombay, a price much lower than one paid to the U.K. and therefore it was alleged that India has suffered a loss of about Rs. 1.33 crores, according to Mr. Mahabir Tyagi (U.P.) mostly by delaying its imports.

It is true that before the Korean war broke out, sugar was offered by some countries in varying quantities at rates which were only slightly higher than the price at which Indian sugar was sold in the country, and the Government would have had to either forego the import duty or to suffer a little loss in selling the foreign sugar in the internal market, as foreign sugar could not be sold at a higher price than that of Indian sugar, the commodity being controlled. But due to the outbreak of war, there was a sudden spurt in prices, and the Government had to pay higher prices than were envisaged when the proposal to purchase sugar was first mooted a few months earlier.

But, in fairness, it must be stated that the Government cannot be legitimately blamed for it. In the best of faith and with honest intention, they were negotiating with various countries to see if they could effect purchase at lower rates, etc. As a matter of fact the tendency of prices in the foreign markets was downward and sugar was quoted for September 1950 delivery at cheaper rates than that for May, June or July delivery. Further, the imported sugar was required for consumption only in December 1950 as the stocks of home produced sugar were enough to last upto the end of November 1950. If in the meanwhile, war broke out, and countries raised up their prices, it is a case of sheer bad luck. None can be accused of inefficiency. It was a matter of judgment and all that one can say is that the decision to wait for a little while before concluding a contract proved costly, due to Korean war intervening. And, we believe, it was incorrect and wrong to charge any official concerned with the purchase or the Government of inefficiency. In due deference, however, to the suggestion made in Parliament to inquire into and report on the question of non-acceptance by Government of certain offers of private parties to import sugar at less price, the Prime Minister gave an assurance to inquire into the matter and it was reported on December 21, 1950, that the Union Minister for Agriculture had appointed Mr. Ganga Nath, a retired judge of the Allahabad High Court, who was then conducting an inquiry into some aspects of sugar crisis of July-August 1949, to institute an inquiry and report on the allegations made in Parliament by Mr. Mahavir Tyagi. Apart from this we hold the view that it would have been advisable to abstain from import of sugar at the present juncture, when we could ill afford it. And stating the extreme case as the Prime Minister put sometime ago, " while sugar is desirable, no one dies without it ".

If more sugar is needed, we hold the view that we must take all steps to produce it internally. It saves us foreign exchange and profits are retained in the country. Besides, foreign sugar is actually *more costly*, than indigenous sugar, and therefore, the ground of cheapness also is not there to recommend it.

Some Foreign Exchange could have been saved if Exports of Sugar were not permitted in 1949-50

Though it is both diplomatic and prudent that India should be exporting some sugar to the extent of one lakh tons every year to foreign countries, with a view to preserve trade and friendly relations, yet we do think that in view of the great scarcity of sugar in 1949-50, India did well in not exporting much sugar. The total quantity exported both by land and sea, during the eight months from January 1949 to August 1949, was 6,376 tons. According to the "Monthly Survey of Business Conditions in India", October 1950 issue, exports of sugar during the 12 months April-March 1949-50 amounted to 7,184 tons while the exports during the 5 months from April 1950 to August 31, 1950, were of the order of 719 tons. In our 1949 *Annual*, we had warned against such exports in 1949-50, in view of the anticipated smaller production than our requirements. Even if such exports, however small in quantity, were not undertaken, it would have been possible for the country, to tide over the scarcity, without imports, with a bit of adjustment and austerity, and some foreign exchange could have been saved to be utilised for other more urgent and better purposes.

Purchases of Foreign Sugar—Mr. Ganga Nath's Report

In pursuance of the assurance given by the Prime Minister during the Parliamentary debate on the food situation on November 16, 1950, that an enquiry would be made into the allegations made in Parliament regarding the import of sugar, Mr. Ganga Nath, retired Judge of the Allahabad High Court, was deputed by the Minister for Food and Agriculture to make an enquiry and submit a report. The following is the gist of the report released on 30-3-1951 :—

"The question of import of sugar became of practical importance only towards the end of April 1950, when the position of home production was more or less, accurately known. No offers for import were invited from anybody. In April 1950 it became clear that the production of the season would be unequal to the demand but since the stocks of sugar produced in India were expected to last upto the end of November 1950, there was no immediate necessity for arranging imports. The trend of world prices during April to May 1950 was downwards. The sugar offers being made were from dollar countries or from Formosa or at prices higher than the price of Indian sugar which could not be considered. It was in June 1950 that the Cabinet decided to import 50,000 tons of sugar to safeguard rationing in December. Almost immediately after, the situation in Korea led to sugar becoming unavailable in the free market and the Government, therefore, decided that imports should be made on Government account through the Indian Supply Mission, Washington, or the Indian High Commissioner, London. All the sugar which the Government have purchased is by negotiation with the U.K. and U.S.A. Governments through the High Commissioner, London, and the Embassy in Washington. No trade agency was employed by the Government of India for these purchases. It is true that this sugar has been bought at a price higher than that prevailing earlier in the year. The increase resulting from the Korean War could not have been anticipated and no responsibility could be attached to any officer of the Government."

CHAPTER 10

CONSUMPTION OF SUGAR

Consumption of Sugar in India on the increase

With the growth in population and sugar habits of the people, the consumption of sugar in India seems to be on the increase. The figures of pre-war, war and post-war periods show that consumption in war-time had increased owing to the heavy demand for sugar from the defence services. According to the Tariff Board of 1950, in 1936-37, the consumption of sugar in the Indian Union was 8.76 lakh tons and it was 9.11 lakh tons in 1944-45 and 9.5 lakh tons in 1947-48. The consumption of sugar in the Indian Union in 1947-48 increased by 0.74 lakh tons over that of 1936-37. This was largely due to the growth of sugar habit among the population, which was caused by an expansion in the urban and industrial population and also in the personnel of the defence services, during the war-time. In 1948-49, the price of sugar was reduced from Rs. 35-7-0 to Rs. 28-8-0 per maund and the consumption reached 12.00 lakh tons. The increase of 2.5 lakh tons in consumption was mainly due to a reduction in the price of sugar by Rs. 6-15-0 per maund and due to better transport facilities for the movement of sugar. It will thus be seen that the consumption of sugar is dependent on several factors, namely, the price of sugar, increased industrial consumption of sugar and transport facilities, economic conditions, and price and availability of gur.

The estimate of the Tariff Board of 1950 for the consumption of sugar in India in 1949-50 and subsequent two or three years till 1953-54 is 13 lakh tons on the basis of the demand of confectionery increased by 5,000 tons to 20,000 tons, steady reduction in the price of cane and sugar and increasing transport facilities. The *per capita* consumption in India in the pre-war time, according to the estimates of the Tariff Board of 1950, was 6.6 lbs. In 1940-41 and 1941-42 it increased to 8.5 lbs. and 7 lbs. respectively. In 1947-48 it was estimated by them at 7.1 lbs. while the *per capita* consumption in 1948-49, taking the population of Indian Union to be 318 million and total consumption at 12 lakh tons, it was 8.96 lbs. The Tariff Board forecast that the demand of sugar is likely to increase in the next four or five years with the improvement of economic conditions in the country. The Board considered that it should be possible for the industry to reach the 1939-40 level of production, i.e. 12 lakh tons by 1953-54. (See Table No. A on next page.)

Sudden Increase in Consumption in 1948-49

The sudden increase in consumption to 12 lakh tons in 1948-49 was owing to a variety of reasons. Briefly, it may be stated that it was due to the sudden fall in the pirce of sugar to Rs.28-8-0 from Rs. 35-7-0 per maund in 1947-48, the comparatively high price of gur (which was not controlled) throughout the season, increase in the purchasing power of

TABLE NO. A

Tariff Board (1950) Estimate of Consumption of Sugar

Year	Total Consumption of Sugar	Per Capita Consumption of Sugar
1936–37	8 76 lakh tons	...
1944–45	9.11 " "	
1947–48	9.5 " "	7.1 lbs.
1948–49	12.0 " "	8.96 "
1949–50	13.0 " "	...
1950–51 to 1953–54	13.0 " "	...

the labouring classes, influx of refugees and other population in towns and cities accustomed to consuming more sugar and improved transport system which led to orderly supplies of sugar in a more regular manner, etc. It is also true that as a result of the scare created in the minds of the people during the latter months of 1949, there must have been some hoarding of sugar, and all these factors were responsible for the sudden increase in the offtake of sugar in 1948-49. It is difficult for us to say what exactly were the causes of great scarcity of sugar during the period of the latter half of 1949, but the Note of the Ministry of Agriculture published by us in our 1949 *Annual* will provide some useful data in this connection. The Tariff Board of 1950 has gone into the question in detail and we only wish such a possibility of shortage will be eliminated in future by taking prompt and suitable steps.

Consumption of Sugar in 1949-50 and Prospects for 1950-51

The Tariff Board of 1949 estimated the annual consumption of sugar at 12 lakh tons. It appears to us that the demand of sugar had considerably increased during the year 1949-50 owing to the fall in the price of sugar to Rs. 28-8-0 per maund and owing to high prices of gur, which were not controlled and which ranged from Rs. 18 to Rs. 22 per maund when the price of sugar was only Rs. 28-8-0. We had been urging the control on the prices of gur, if the production of sugar was to be augmented and diversion of cane to gur manufacture were to be stopped (*vide* our 1949 *Annual*). The prices of gur being uncontrolled in 1949-50, the production of sugar was restricted and owing to the shortfall, the consumption of sugar had to be curtailed by the introduction of rationing in 1949-50. Though the annual demand for sugar as estimated by the Tariff Board of 1950, seems to be 13 lakh tons for 1950-51 and subsequent two or three years, in view of the anticipated maximum production of about 11 lakh tons, we feel that some kind of rationing will have to be resorted to, particularly as the time seems to be inopportune for getting imports to augment the food supplies. Till production increases,

the people will have to make do with smaller supplies, and with the use of gur, an acceptable substitute sweetening agent, to which millions in the country are accustomed for ages.

Average Per Capita Consumption very low in India

Sugarcane, sugar and gur form vital elements of human nutrition. Compared with other citizens of the world, citizens in India consume very little of sugar and gur, mostly because there is no scope for them to secure enough for their requirements. Citizens of India need more nutrition than they are receiving today in the form of gur and sugar. Of both gur and sugar the consumption in India, according to former Minister for Agriculture, the Honourable Mr. Jairam Daulatram, was in 1948-49 only about 26 lbs. per head per year whereas a citizen of Cuba consumed on an average per year 88 lbs. of sugar, of the United States 97 lbs., of the United Kingdom 106 lbs. and of Australia 160 lbs. Based on a consumption of at least 2 ozs. per day, as a part of a well-balanced diet, a citizen of India would, he estimated, need about 46 lbs. of both gur and sugar per year. This showed that gur and sugar industry needed at least to double its production, if the Indian citizen was to have his due in the matter of nutritious food.

From Table No. 5 in the "Sugar Industry at a Glance" which gives the latest figures of *per capita* consumption, it will be found that while Denmark has increased its *per capita* consumption from 85 lbs. in 1948 to 128 lbs. in 1949, Brazil has increased its consumption nearly over 70 per cent from 34 lbs. in pre-war period to 51.7 lbs. in 1949, South Africa has increased its *per capita* consumption from 47 lbs. in pre-war time to 58 lbs. in 1949, the United Kingdom has increased its consumption from 106 lbs. in pre-war period to 112 lbs. per head per year in 1949, the U.S.A. has increased its consumption from 97 lbs. in pre-war time to 103 lbs. per head per year in 1949. In India the *per capita* consumption of sugar including gur has shown no progress, although the industry has developed considerably in the last 18 years.

The production of sugar in 1949-50 was 9.75 lakhs, though the rated capacity of the sugar industry was about 14 lakh tons and the estimated demand for sugar was 13 lakh tons. The production of gur in 1949-50 was 27.14 lakh tons. There is evidently a large potential demand in the country for both sugar and gur, the production of which need to be doubled to provide adequate nutrition. At least, the *per capita* consumption of both sugar and gur which was only 26 lbs. in 1948-49 needs to be increased to 46 lbs. This shows that gur and sugar industry needs at least to double its production, if the Indian citizen is to be provided his full requirement in the matter of nutrition.

Consumer Expenditure on Sugar per year in India from 1947-48 to 1950-51

Calculated on the basis of retail price of sugar as given in Table No. 4-A in the "Sugar Industry At A Glance" Section, the *per capita*

consumption and the population, the consumers in India can be said to have been spending on gur and sugar Rs. 318 crores in 1947-48, Rs. 546 crores in 1948-49, Rs. 351 crores in 1949-50 and Rs. 362 crores in 1950-51. (*Vide* Table No. 4 and Table No. 4-A in the Sugar Industry at A Glance). Of this, on sugar alone, the consumers in India spent about Rs. 80 crores in 1947-48, Rs. 171.5 crores in 1948-49, Rs. 104 crores in 1949-50 and the estimated expenditure in 1950-51 is expected to be Rs. 108.4 crores.

Per Capita Expenditure on Sugar in different countries

From Table No. B. below an idea will be had of how much each person was spending on sugar in India in comparison with other countries, in the year 1947-48:

TABLE No. B

Country	Per Capita Consumption (lbs.)	Retail price of sugar	Expenditure on sugar per head per year
		Rs. a. p.	Rs. a.
Hawaii	145	0 7 2	68 0 (Approximately)
Japan & Formosa	33	1 0 7	34 0 ,,
South Africa	47	0 5 3	15 7 ,,
Australia	116	0 4 7	32 11 ,,
Louisiana	97	0 7 2	42 8 ,,
Cuba	88	0 6 0	33 0 ,,
Peru	31	0 2 7	4 14 ,,
India	6*	0 6 10	2 7 to 3 12

Vide Indian Central Sugarcane Committee, Annual Report for 1948-49, page 49.
* According to the Tariff Board of 1950, the *per capita* consumption was 8.96 lbs.

Utilisation of Sugar and Gur in India

Not all sugar and gur produced in the country goes for tea, coffee and domestic uses. Some percentage of sugar produced is diverted to confectionery, candy, batasa, sharbat and miscellaneous products including murabbas. So also, a portion of gur produced is utilised for non-human consumption, such as stock-feeding and for industrial purposes.* Latest figures on the actual utilisation of sugar in recent years are not available. But the report on "the Marketing in India and Burma", November 1941, provides figures of percentages on the utilisation of gur and sugar production for various purposes and may prove instructive :—

* After the introduction of prohibition in certain States of India in 1948-49, a certain quantity of gur is also being utilised for illicit distillation. According to some, the quantity is large, viz. in the U.P., Madras, etc.

TABLE No. C

Utilisation of Gur and Sugar

	Percentage of total gur	Percentage of total sugar
For Stock feeding	5.1	...
For Industrial purposes	4.9	N
For Human Consumption		
1. Drinks:		
Tea and Coffee	1.2	19.4
Milk	4.1	8.8
Sharbat, etc.	4.2	14.6
Total for drinks:	9.5	42.8
2. Domestic Uses	69.2	22.5
3. Confectionery	11.3	28.9
4. Candy and Batasa	...	4.3
5. Miscellaneous products including murabbas ...	(N)	1.5
Total for Human Consumption	90.0	100
Grand Total	100.0	100

Vide "Indian Sugar Statistics, 1950".

Confectionery Industry requirements not met

The direction in which great scope for the development of sugar industry lies is the confectionery industry, a potential consumer today of 550 lakh lbs. or 25,000 tons per year out of which Messrs. Parry's Factory alone requires 325 lakh lbs. of sugar. The sugar industry was able to meet only partly the requirement upto 50 lakh lbs., i.e. about 15 per cent of its total requirement in the year 1949. This will be clear from Table No. D on next page, which is based on the figures prepared by Messrs. Parry's Factory at Nellikuppam, Madras.

It is essential therefore that Government should take steps to allocate at least 30,000 tons of sugar per year to the confectionery industry. Otherwise, the industry which has the potential capacity to earn foreign exchange by exports of its production will be seriously hampered being starved of the basic raw material, sugar.

Confectionery has been an important item of food in all countries at all times. Out of 104 lbs. *per capita* consumption in the United King-

TABLE No. D

Sugar requirements of Confectionery Industry

Subject	Production of confectionery	Remarks
All-India Production of confectionery per year.		
1914	275 lakh lbs.	Refer to undivided India
1949	330 lakh lbs.	Potential capacity 550 lakh lbs.
Production at Nellikuppam in Parry's Factory per year.		
1914	5 lakh lbs.	
1949	50 lakh lbs.	Potential capacity is 325 lakh lbs. Today production is restricted owing to shortage of sugar
Per capita consumption of confectionery in India.		
1914	0.33 oz.	
1949	1.5 oz.	

The figures refer to factory-made confectionery and do not include quite a large separate production on the cottage industry basis.

TABLE No. E

Foreign Imports of Confectionery into India

Year	Quantity Cwt.	Value in Rs.
1935–36	33,690	21,53,670
1936–37	37,133	22,89,858
1937–38	27,741	18,79,891
1938–39	23,772	16,70,739
1939–40	22,144	13,76,797
1940–41	12,568	10,41,618
1941–42*	7,637	8,47,784
1942–43*	2,433	2,65,010
1943–44*	194	34,734
1944–45*	1,015	1,40,597
1945–46*	2,805	2,93,828

* *Vide* Annual Statement of Sea-Borne Trade of India, 1948-1949, published in 1949.

dom, 58 lbs. went into direct domestic consumption and 46 lbs. represented industrial consumption. In the U.S.A. hard confectionery (candy industry) is an industry of great importance and considerable magnitude. In 1941, the industry sold 21,500 million lbs. of various products at an estimated value of 407 million dollars. In India also confectionery in some form or the other has always been in use. There has been a keen demand for machine-made confectionery of western type for a good many years. This will be evident from the figures of imports given in Table No. E on the previous page.

Total demand of Confectionery in India works out to 3% of total Sugar Production

Assuming the total average annual production in the country to be about 10 lakh tons of sugar, the total demand of the confectionery for 30,000 tons works out to only 3 per cent of the total production in the country. The possibility of export of Indian confectionery is not very great owing to high prices of sugar in the country. But its requirements should be met more generously.

CHAPTER 11

PRINCIPAL AGRICULTURAL PROBLEMS OF THE INDIAN SUGAR INDUSTRY

The Main Problems

The main agricultural problems of the industry in India at the present time are (1) increase of yield of cane per acre, (2) improvement in the quality of cane, and (3) reduction in the cost of cultivation of cane. The first point that naturally crops up in regard to any consideration of the question of increasing the yield of cane per acre is whether we can ever aspire in India to reach the yields of cane obtainable in Hawaii or Indonesia. It should be noted that both Hawaii and Indonesia are situated in the tropical belt, while 85 per cent of the cane-growing tract in India is in the sub-tropical region, and this is no mean handicap of nature. Apart from the climatic limitations, there are other serious handicaps peculiar to this country, e.g. the prevailing system of land tenure, the fragmented and uneconomic holdings of land, illiteracy of the cultivators, uncertainty of rainfall, lack of proper irrigation facilities over a large part of the cane area, insufficiency of manure, lack of knowledge of crop rotation, etc. At the same time we are aware that with adequate irrigation facilities and supply of plentiful manure of suitable variety, yields of 60 tons and more have been obtained in the sub-tropical belt of Northern India by certain Government Research Stations and also by certain progressive cane-growers. In Bombay, for instance, in 1935-36, yields of cane of over 100 tons per acre were obtained when a competition was organised. It does not seem to be unlikely that if a generous provision is made for research work and if cane development is organised on sound lines, an average yield of about 800 maunds per acre can be obtain-

ed over the whole of U.P., Punjab and Bengal (as against 350 to 400 mds. per acre at present). The average yield in Bihar, which is mostly a rain-fed area, can also be increased to about 600 maunds per acre, while in tropical India the average yield can be increased to 1,100 maunds per acre. If such development is vigorously continued, it will be possible to get higher yields still during the next decade.

In accordance with the expectation of Mr. N. L. Dutt, who has done valuable research work on sugarcane in Coimbatore under the guidance of Shri T. S. Venkataraman, the reputed scientist who has revolutionised the sugarcane industry of the country by the wonderful improvements made in respect of the quality of cane, it should not be impossible to obtain an average yield of 1,100 maunds per acre in the subtropical areas. This indicates how much progress yet remains to be achieved.

Dr. Burns' Target for Cane Yield—55 tons per acre

In his Report on the "Technical Possibilities of Agricultural Development in India" published in 1941, Dr. Burns, formerly Agricultural Commissioner to the Government of India, examined the question of improvement of the yields of various agricultural commodities. In so far as growth of cane was concerned, he also expressed the opinion that it could be increased from the present average of 15 tons to 30-55 tons per acre by the employment of available resources in the most useful way. The methods suggested for reaching the increased target were better manures, improved varieties of seeds and implements, control of crop rotation, more scientific cultivation and maximum utilisation of available fertilisers, water, labour, soil and livestock.

Variation in Prices of different qualities of Cane suggested

In regard to the second point, viz. improvement in the quality of cane, it is necessary to ensure that the sucrose content of cane is fairly uniform throughout the crushing season, and not very low at the beginning and towards the end of the season, as is the case at present. The ratoons and early varieties will generally need to be crushed in the early part of the season. The suggestion made for offering normal prices for these varieties, and for offering much lower prices for the mid-season cane in order to dissuade cultivators from offering unripe mid-season cane in the early part of the crushing season deserves serious consideration of the State Governments. From January onwards normal prices should be offered for the mid-season varieties, and in order to induce the cultivators for keeping late crushing cane in the fields for crushing towards the end of the season, a slightly higher price may be offered.

Increase in Yield of tonnage and cheapening cost by manuring, ratooning, etc.

In regard to the third point, namely, reduction of the cost of cultivation, it should be noted that any improvement in the yield of tonnage of cane will certainly bring about a fall in the cost of production. Other

methods suggested for consideration are : (1) manual labour now largely in use for the entire agricultural operations should be substituted by labour-saving implements drawn by bullocks, (2) manures should be supplied at the proper time and in proper proportion to increase their efficiency, and (3) perhaps the most important way in which the cost of cultivation could be reduced is by resorting to the practice of ratooning and it has been seriously recommended that the research stations should devote greater attention to this aspect of the question in the years to come.

Increase in Cane acreage not necessary—Palm Sugar Possibilities should be explored

We would also invite the attention of the readers to the observations made by Mr. N. L. Dutt in his Report referred to above, wherein he has recommended areas where sugarcane cultivation can be encouraged advantageously. After considering the various regions, namely, the U.P. and Bihar, Punjab, Bengal, N.-W.F.P., Bombay, Madras, etc. wherein there are more possibilities of encouraging sugarcane cultivation in some areas, he comes to the conclusion that as the average yields per acre in India are still very low, a great scope exists for the improvement of yield before thinking of increasing the area under cane in any tract. As we observed before, we feel that it will be possible for India to produce all the sugar it needs from its present crop, if it is properly utilised, by progressive expansion in the yield and quality of cane, and it may not be necessary to increase the area under cane, which can safely be left for the cultivation of food-crops of which a very serious shortage has been noticed in the country of late. Indeed, if the yield per acre, is raised appreciably and before long, and if the palm-trees * in the country are tapped for making sugar (this has been discussed earlier, it seems to us that it would also be possible to release some of the present land under cane for the growth of foodcrops. We suggest an early investigation into this problem.

Diseases in Cane and Pests must be eradicated

In order to improve the yield as well as the quality of sugarcane it is imperative to eradicate the diseases in cane and pests. It is a matter of common knowledge that in respect of yield of cane per acre, its sucrose-content or average percentage of recovery of sugar from cane, we in India are still behind many other sugar producing countries, viz. Java, Cuba, Hawaii, and the Philippines. Unless we are able in a short time to effect considerable improvements in this direction, with the aid of organised research, it will not be possible for us to stand the vigorous competition of other advanced sugar producing countries in the years to come. Whether it is due to plantation of cane without a scientific system of rotation of the cane crop, absence of fertilisers and manure, lack of

* *Vide* Appendix III to "Problems of Sugar Industry in India" by M. P. Gandhi, with a foreword by Sir Purshotamdas Thakurdas, 1946, 425 pages, for details in regard to this matter.

plentiful water supply either through irrigational canals or tube-wells, and diseases and pests—or a combination of any of the above factors—the fact remains that our cane crop at present is poor both in respect of quality and yield per acre. The direct consequences of this are high cost of production of cane, low yield of sucrose-content of cane, and a great recurring national loss, valued at millions of rupees to the agricultural community in the country.

Great damage is occasionally done by insect pests and diseases in various States. The sugarcane crop is easily susceptible to diseases. In some years the harm caused by pests and crop diseases is so wide-spread that it materially alters the fortunes of the cultivators and results in considerable reduction in output of sugar and yield of recovery percentage. This should be avoided as far as possible, by cultivating proper cane, and by organised research to combat these pests.

Increase in Yield as a result of Parasite Control

How parasite control of pests can be effective has been exemplified in the case of the sugarcane. It has been estimated that sugarcane stem borer causes a loss of not less than 7.5 per cent of the entire sugarcane production in the country. In the parasite laboratory of the Indian Institute of Agricultural Research, New Delhi, egg parasites which are capable of killing the stem borer are being produced in millions, in specially designed cabinets, at a very low cost of Rs. 2-8-0 for treating one acre per season. This biological control experiment has shown the following increase in yield in different provinces of India during the four years from 1945 to 1948 :—

TABLE No. A

(Increase in maunds per acre)

——	1945	1946	1947	1948
Orissa ...	83	217	127	164
Madras ...	168	139	*	26
Bombay ...	289	399	252	*
Bihar ...	123	140	126	137

* Not available.

Education of Cultivators by demonstration of Improved Methods

Apart from tackling by special means the problem of pests and diseases, there is a great necessity of undertaking other measures which would bring home to the cultivator the desirability of effecting improvements in the conditions of cultivation of cane. The average cultivator in India is hardly aware of the latest improved methods of cultivation or manuring or rotation of crops, or selection of suitable varieties to the

soil, and the introduction of cross-breeding and hybridisation. He carries on in the traditional style from year to year unmindful of the revolutionary developments in other lands and unaware of the possibilities of improving his lot. Industrious but having no capital and implements, he works hard but the results have been poor compared with other counries. Improvement in quality of cane grown in the fields and reduction in the costs of cane cultivation are two important problems that face the agriculturist, the Government and the industry at present. In view of their importance it is the duty of the Government to devise suitable means of imparting instructions in modern methods of cultivation to the ryot and to make available to him the fruits of organised research with a view to improve his economic condition, and to establish the industry on a sound and firm basis. Although it is satisfactory to note the work done in this connection by the Sugarcane Research Stations at Coimbatore, Shahjahanpur, Muzaffarnagar, Karnal, Padegaon in the Deccan Canal area, Pusa, Bangalore, Hyderabad and many other places, and although improvements have been effected in quality of cane grown in various States, we feel that the time has definitely come when we should redouble our efforts to establish more intimate contacts with the cane-cultivator and to initiate him into modern methods of better farming by actual demonstration. For this purpose it is essential to establish a series of demonstration farms and nurseries in all cane-growing States and Districts in order that they may devote their attention to the propagation of cane of higher tonnage of cane per acre, of early and late-ripening varieties for extending the cane-crushing season, of increasing the yields by suitable crop rotation, provision of a suitable supply of water by sinking tube-wells, or irrigation, for the crop, early detection and eradication of crop pests, etc. These demonstration farms and centres should serve as the arteries from where trained agriculturists would tour round the surrounding districts in order to show or demonstrate efficient methods of cultivation and manuring suitable to the soil in the various places and would also distribute good and improved seed amongst the cultivators. An important function of these farms would be to conduct researches as to the easy methods of combating cane diseases and pests. In addition to this, the State Governments should also undertake other allied work of effecting improvement by educating the ryot in the use of irrigation water, by extension of the canal system and by affording necessary assistance in tapping subterranean sources of supply of water, by offering supply of manure for his impoverished land, etc.

Tube-Well Irrigation Schemes and Centre's Subsidy of Rs. 3 lakhs to U.P. in 1950

In 1947-48, in order to speed up the programme of tube-well construction as part of the " Grow More Food " campaign in East Punjab, U.P., and Bihar, the Government of India invited two American experts to advise and put up specific schemes for increasing the number of tube-wells in these provinces. The experts arrived in June 1948, and came to certain conclusions in consultation with technical officers concerned

with tube-well construction in these three provinces. They have submitted a complete scheme late in the year for supplying water to crops under tube-wells on the basis of volume and not acreage so as to make the supply as economical as possible. The proper spacing of tube-wells situated near canals has also been thought of in order not to unduly depress the sub-soil spring supply. In addition to this, the possibility of construction of radial tube-wells was also considered.

The Ministry of Agriculture also announced in May 1948 a programme for construction of 6,000 tube-wells in various parts of the country over the next five years, as a part of the "Grow More Food" campaign. The lack of electric energy for tube-wells was proving the bottleneck. Little progress was however visible till 1949.

The U.P. Government had 2,100 tube-wells and plans were prepared for 750 more. Power plant was also ordered worth Rs. 96 lakhs.

The Bihar Government had 134 tube-wells and plans were prepared for construction of 250 more. Little progress was recorded till 1949.

In 1950, the Ministry of Agriculture, Government of India, granted subsidies amounting to Rs. 3 lakhs to the U.P. Government for advancing loans to co-operative irrigation societies in the Etawah and Meerut districts. The scheme was expected to enable societies to sink 60 tube-wells, instead of 1,110 masonry wells as originally planned. It is expected to give irrigation to an additional 18,000 acres.

Improvement in Cane Crop essential

The immediate necessities for the cane crop of India are (1) improvements aimed at lowering the cost of cultivation by increasing the tonnage per acre which in turn will give a better return to the cultivator, and (2) raising the quality, e.g. by producing varieties suited to various localities, having higher sucrose-content and greater resistance to diseases and pests so that they may command higher price from sugar manufacturers. * The work of improvement on an organised scale should be undertaken in areas adjoining the sugar mills and such areas gradually extended. The development of reserved and gate-areas of the sugar mills are likely to give immediate benefit both to the manufacturer and to the cane-grower. The ultimate success of the sugar industry hinges upon the ability to produce better and higher yields of sugarcane per acre since sugarcane forms the raw material of the industry and accounts for well over 60 per cent of the cost of production. Improvements achieved in this field will be of lasting value and will result in cheapening of the prices of sugar. The extension of the present cane-crushing season of about 4 months to at least 6 to 7 months in the year by encouraging and promoting the growth of early and late ripening

* It is a pity that yet no suitable method has been evolved whereby the cultivator of superior quality of cane would get a premium over the fixed minimum price of cane.

varieties of cane suitable to the climatic conditions of the various areas of production, will also be of considerable help.

Valuable Educational Effect of Cane-Crop

Although the total area under cane is now less, 3.64 million acres out of 200 odd million acres cultivated in the Union of India, the importance of the sugarcane crop is out of all proportion to the small area which it occupies. It has a valuable educational effect on the cultivator.

Sir John Russell, in his Report on the work of the Imperial Council (now Indian) of Agricultural Research, in applying science to crop-production in India (1937) observed as follows: "The cultivator learns the advantages of modern varieties of crops, of fertilisers, of proper cultivation; the need to watch for plant diseases and to seek advice when he is in difficulties. The Agricultural Officer will have more chance of coming in touch with the sugarcane grower than he will with an ordinary small cultivator."

Improvement of Cane essential

During the past 18 years, while the quantity of cane and the acreage under cane have increased considerably, there has been little corresponding increase in the yield per acre, even after the Coimbatore varieties were introduced 30 years ago. The average yield of cane has remained almost stagnant at 14 tons since 1931-32 and there appears to be little possibility of improvement in this respect unless radical measures are undertaken in this behalf. We feel that the solution of the problem of increasing the yield may be helped if the zones reserved for individual factories are made more rigid and permanent. Just as it is obligatory on the part of the factories to purchase all the cane from the cultivators in their respective zones, it should also be made obligatory for the cultivators to deliver all the cane to the factories without diverting it for gur or khandsari. This would create a greater interest in the factories for the development of the zones, and would also induce the factories to take a direct interest in the improvement of cultivation of cane in their zones by giving financial help to the cultivators by providing fertilizers, better seeds, tube-wells, etc.

Lack of Nutrition to Soil must be remedied

We are convinced that the lack of adequate nutrition to the soil is perhaps the most fundamental reason for the low yield of cane per acre. While the Indian cultivator has evolved a skilled cultural system within the means at his disposal, he has not been able to provide adequate nutrition for maintaining the fertility of the soil. Sugarcane, as is well known, is particularly an exacting crop, and if the average yield is to be materially increased, a higher level of fertility must be maintained. The area under improved varieties is well over 90 per cent now but yet the yield is very low, and that is due to the low average fertility of the soil, and urgent attention should be given to this matter. At the same time

it would be helpful if improved seeds are provided, composting of farmyard manure and town refuse is undertaken, suitable fertilisers and manures are made available, adequate irrigation is arranged, and protection to plant from diseases, pests and wild animals is ensured. The optimum use of chemical fertilisers has shown improvement in yields to the extent of 50 per cent to 100 per cent in some areas. There is a great shortage of sulphate of ammonia which is the most popular and valuable chemical fertiliser.

We hope, however, that with the establishment of the fertiliser factory at Sindri in Bihar by 1951, it will be possible to get from within the country a production of about 3½ lakh tons of sulphate of ammonia, as expected by the Government.

Clash between Cane-Cultivators and Consumers' interests

In the case of sugar, the interest of the consumer also clashes to some extent with the interest of the primary producer of the raw material, namely, sugarcane, who must be assured of a fair price comparable with other agricultural crops, and it is a point for examination by Government as to how far an adjustment can be made between the two interests by reducing cane prices so as to balance the economy. If the primary producer is to be paid a high price for his produce, viz. cane, in consideration of his cost of production, or of the returns from alternate crops, or for any other reasons, political or economic, the conclusion is inescapable that the consumer will have to bear such additional burden. If, on the other hand, the burden on the consumer is to be reduced, to mitigate its severity, the interest of the primary producer may have to be sacrificed or ignored to some extent and for some time. The Government have to balance this delicate position.

What is more, it ought not to be forgotten that the industry is of strategic importance to India, and various countries of the world, including the U.K., U.S.S.R., Germany, etc. have maintained it in their territories at great sacrifice in order to maintain their independence for the supply of such an essential commodity during periods of war or other emergency. India has built up the industry after years of protection and it would seem to be unwise to throw away the advantages flowing from the development of such a great national industry of outstanding importance in the agricultural economy, for the sake of the doubtful advantage of imports at lower price from foreign countries, which may even have natural advantages enabling them to produce sugar cheaper than India.

The main problem before the industry and, indeed, the country, is the problem of lower yields of cane per acre, and as long as agriculture in India generally remains in the backward position in which it is today, the present situation will have to be faced squarely, and strenuous efforts will have to be made for improving the efficiency of agricultural operations in the country, rather than call for imports and ruin the agricul-

tural economy of the country. There and there alone lies the solution of the present problem of the high price of our sugar, and it has to be tackled with determination, drive, foresight, and vision, for maintaining the agricultural economy of the country intact.

Substitute Gur for Sugar

Finally, we feel that it would be a confession of failure on the part of the Government of the country, having all the resources for production of larger quantities of sugar, to turn to foreign countries for assistance in the matter of supply of sugar, when they can produce the same from within the country by taking effective steps for ensuring the co-operation of all interests concerned, e.g. manufacturers by crushing cane, and agriculturists by supplying cane. For instance, if larger quantities of sugar have to be produced at a controlled price to meet the internal consumption, adequate cane supplies will be essential, and to achieve that end, it may be also necessary to control the price of gur which is an acceptable substitute for sugar. Or, in the alternative, it might be left to the manufacturer to produce larger quantities of sugar by lifting control over the price, and leaving its level to the natural laws of supply and demand and internal competition. *

No Colour Bar for Gur

Failing that, we must make do with gur, which is a very suitable, if a little crude-looking, substitute, and which is fortunately available in plenty. The consumer will have to shed his fastidiousness and get used to the use of gur, as a sweetening agent, for the satisfaction of his palate. Gur has various good qualities, and indeed, is superior to sugar in several respects. It lacks only the white colour of sugar, but we should have no colour bar ! ! ! ! !

Protection of Sugar Industry—our Solemn Duty

It is essential therefore for the Government of India to make up their mind resolutely on this subject, and to evolve a suitable policy which would lead to maximisation of sugar production in the country and thus eliminate the necessity of importing sugar from foreign countries at any time, to meet the need of consumers in towns and cities. Sugarcane, which is an important cash crop, has a very unique place in the agricultural economy of the country, and it would appear to be

* It is gratifying to find that in the 1950-51 season, the Government of India have made an interesting departure in their erstwhile policy by creating an incentive for the manufacturers to produce larger quantity of sugar by giving a fair increase in the price of sugar and by liberating them from the official controlled price of sugar for quantities produced by them in excess of 107 per cent of their previous year's production. They have also taken the laudable step of bringing the price of gur, as well as that of khandsari under control, just like sugar. This will prevent diversion of cane for gur manufacture if this Act is properly implemented. The effects of the new legislation will have to be watched with interest, as the future policy will depend largely on the success achieved in this novel experiment made in 1950-51.

unwise to think of importing sugar from abroad as it would have a detrimental effect on the agricultural economy of the various states. It is for that reason that the various states had strongly supported the case for protection to the sugar industry, and their opinion should receive careful consideration at the hands of the members of the Indian Parliament and the Government of India, whose solemn duty it would be to ensure that although protection has been withdrawn from April 1, 1950, no injury should be caused to it by allowing large-sized imports of sugar from foreign countries on the ground of their comparative cheapness.

Integrity of the Indian Sugar Industry must be maintained unimpaired

We have discussed the problems of the sugar industry in great detail in the previous pages. We would like to emphasize here, as we did in the course of our written memorandum to the Indian Tariff Board in November 1949, that it is of urgent importance that the integrity of the sugar industry, which is a national asset of great strategic value to the country, should be maintained unimpaired and no steps should be taken which would create any hopes to any sugar producing countries of the world to build up a market in India to the detriment of this valuable industry merely for the reason that it is possible for those countries to produce and sell sugar a little cheaper as compared with India.

Sugarcane cultivation is an integral part of the agricultural economy of the country and there would be no point or purpose in giving a shock to it by permitting import of sugar at lower rates out of regard for the short-term interests of the consumer. The interests of the consumer would lie in the steady supply of sugar at as cheap rates as possible from internal sources, and in this case as the sugarcane industry, both in its cultivation and manufacturing aspects, is of vital importance to the nation, no advantage would be gained by subjecting it to unnecessary shock. The remedy, if any, for improving the present position of the industry lies in a general overall improvement and efficiency of Indian agriculture, and consequently, sugarcane cultivation, which can only be achieved at the earliest date by comprehensive research work, expenditure on which should be liberally allowed by the Government out of the large revenues of over Rs. 7 crores which accrue annually to them from the excise duty on sugar.

Development must be steadily maintained

The romantic development of the sugar industry since 1932 and the magnificent contribution it has made towards meeting the urgent demands of sugar during the period, including the six years of World War, must meet with the highest appreciation of the public and the State. It is undoubted that the industry has fully justified the measure of liberal protection granted to it. The war has also revealed the necessity of strengthening the position of this industry for any emergency which may crop up. Its further development has also become necessary due to the requirements of the millions in this country of an energising food containing 100 per cent carbohydrates of which there is a short supply in India

and in the whole world at the present time. The country was starved of supplies of sugar in spite of the policy of the Government to maximise sugar production in the country, because except in one year, namely, 1943-44, it was not possible to increase production of sugar to a figure higher than the production during the war period. This was due, however, to several bottlenecks, namely, a decrease in the supply of cane in suitable quantities, of raw materials, of transport, lack of a co-ordinated policy, etc. The production has now reached 9.75 lakh tons. The Government of India has recommended a further expansion of the industry. We entirely agree with this view. We earnestly hope and trust that the Government of the Republic of India, will take a live interest in the safeguarding and welfare of this industry, and take all measures to ensure its co-ordinated development all over the country, and thus enable the various states to derive benefit from it.

Industry has fully justified Protection

We are convinced that there are possibilities for further expansion of the industry during the next decade with a view to catering for the increased demands of both sugar and gur which are bound to result from the success of the plans being undertaken by Government for the economic development of the country. We also feel that Government should evince the greatest care and concern for safeguarding and supporting this large national industry which has an unique place in the agricultural economy of India and which has stood by the country during the war period and made available supplies of both sugar and gur at reasonable rates without profiteering and even without having regard for its financial condition (some units have had to sustain losses during 1945-46, 1946-47 and 1948-49), in appreciation of the effects of such a far-sighted policy on the minds of the general public which has helped in the establishment of this industry, aided no doubt by the impetus of a liberal protective tariff policy adopted by the State from 1932 to 1950.

Sugar Industry — Its immense Size

There is no doubt, whatsoever, that this national industry, second largest in the country, and next only to cotton textiles, can legitimately claim to have served the country satisfactorily and it would be the solemn duty of the Indian Parliament and Government to look after and safeguard this industry which has responded so magnificently to the country's call and which has so thoroughly justified the grant of protection, in the years to come, and to plan suitable measures for its further development in a manner which would ensure the amelioration of the condition of 2 crores of agriculturists, 1,35,000 labour, 3,500 university men, a large number of transport workers and persons engaged in the village industry of the manufacture of gur, and also guarantee a fair financial return to the industrialists and investors whose investment may be estimated at over Rs. 33 crores, which has stopped the drain from the country of 16 crores of rupees per annum with the cessation of sugar imports from 1936 onwards, and the total annual value of whose production (of both gur and sugar) has been estimated at about Rs. 260 crores.

Increase in Production and cheapening of Price are urgent needs

The problem of the greatest importance at this juncture, in our view, is planning for a rationalised development of the sugar industry and cheapening of its price so that it may be possible for India to satisfy the consumers and enable them to appreciate the advantage of having developed a home industry after granting it adequate protection for a number of years, and provide plentiful quantities of sugar, an energising food, rich in calories, for meeting the needs of nutrition of the people, and even for export to other countries like Afghanistan, Nepal, Tibet, Persia, Ceylon, Pakistan, etc.

Curtailment of Expenditure on Research—a danger signal

We feel that it would be a false economy to curtail expenditure on research, particularly when we see that the sugar industry in other countries of the world, namely Java, Cuba and Philippines, has been able to achieve its present status only by comprehensive research work carried on efficiently over a number of years. We therefore urge with all the emphasis at our command upon the Government of India the necessity of carrying on intensive research work of a practical character with a view to bringing down the cost of production of sugarcane and sugar in the country.

We consider that any curtailment in the grant of Re. 0-4-0 per cwt. (as given in 1947-48) for research work is a danger signal for the entire agricultural economy of the country. Besides, we see no reasonable or rational argument for reversing the decision of increasing the grant arrived at only in 1947-48. True, there is financial stringency, but expenditure on research will pay itself several times over by the results which will follow. We suggest its immediate restoration and pending that, a larger allocation.

Area under Sugarcane in India is 2% of the area under Foodgrains

Though the area under sugarcane has of late been found to be decreasing owing to its diversion for foodcrops, we are of the opinion that no increase in the area is at all required though efforts need to be made to increase the yield per acre. From Table No. 34 in the "Sugar Industry at a Glance" it will be apparent that the area under sugarcane was 40.47 lakh acres in 1947-48. It was decreased to 37.91 lakh acres in 1948-49 and in 1949-50 it stood further decreased to 36.41 lakh acres. In the section of "Cost of Cultivation" we have made the point clear that the existing area is quite enough for gur and sugar production and need not be expanded, and if at all, it is still to be decreased, palm gur possibilities, to cater to the sugar and gur requirements of the country, be explored.

The following table will show that the area under sugarcane in India was 2 per cent of the total area under foodgrains in 1948-49, the area

required for gur out of the total sugarcane area is 53 per cent and that required for sugar is 24 per cent of the area under sugarcane :—

TABLE No. B

Area under Sugarcane and Foodcrops

——	1948–49 area ('000 acres)	Percentage of the Total foodgrains area
All Foodgrains (Est.) ...	187,600	
Sugarcane (Final Forecast) ...	3,645	2%
Area required for Gur Production (53% of the total area under sugarcane)	1,932	1.03%
Area required for sugar production (24% of the total area under sugarcane)	875	0.47%

The above table will show that less than ½ per cent of the area under foodgrains is being used for sugar from sugarcane. In commenting on the above table, the former Minister for Food and Agriculture, Mr. Jairamdas Daulatram said, " If the entire area used for sugar from sugarcane were to be used for foodgrains it will make a difference of ½ per cent. I do not thereby mean that even that may not be done, but I have given the above figures only in view of the impression created that a tremendous difference in food production would arise, if sugar were not produced from sugarcane ".

Need for Soil Rejuvenation to increase Yield

Sugarcane is an exacting crop and if the average yield is to be materially increased, a higher level of fertility of the soil needs to be maintained. This is necessitated especially in view of the fact that though the area under improved varieties is well over 85 per cent to 90 per cent, yet the yield is very low in India, mostly due to the low average fertility or the decreasing fertility of the soil, on which attention needs to be concentrated hereafter. An enquiry undertaken in Hawaii on the subject, why the production of sugarcane on lands under actual farming practices does not equal or even approach that which should be expected from scientific research showed that in spite of improved methods of cultivation, the crop yields were barely holding their own. The only answer for the difference between the expected and actual yields, according to Dr. L. D. Baber, was that the natural productive capacity of the soil has been deteriorating at a rate almost fast enough to offset the improvement in soil and crop management (*vide* " Australian Sugar Journal ", dated 15th August 1949). We feel that something similar is happening in India and we therefore draw the attention of the Ministry of Agriculture to this question in order that they may be able to devote their attention

to it. The importance of soil rejuvenation with the help of suitable fertilisers and manures, besides protection of plant from diseases, pests and wild animals and adequate irrigation cannot be over-emphasized. Recent experiments carried in Mauritius, according to the *International Sugar Journal*, May 1950, indicate that enduring improvement both in yield of cane and extraction are possible as a result of basaltic dressings. To each of the ratoon crop a dressing of 31 kg. nitrogen, 29 kg. phosphoric acid and 31 kg. potash per arpent* was given to all the plots. The recovery of sugar was found greater in plots dressed with basalt and the magnitude of the increase appreciated with the amount of basalt applied. Regarding the question whether the practice would be economic, it was estimated that additional 26.6 tons cane resulting from a dressing of 100 tons basalt yields, over the eight-year period, 3.73 tons of sugar, 670 kg. molasses, 430 kg. filter press-cake and 100 kg. ash. The revenue obtainable therefrom would be Rs. 965 on the basis of sugar Rs. 250 per ton, molasses Rs. 25 per ton, and filter press-cake Rs. 15 per ton and ash Rs. 100 per ton. Deducting the cost of harvesting and carting the extra tonnage at Rs. 7.59 per ton, a net revenue of Rs. 765 per arpent is obtained. On the debit side is the cost of production, carting and spreading 100 tons powdered basalt. A special study conducted in 1948 placed this figure at Rs. 2 per ton, provided production was fully mechanised. It is estimated that it is possible to reduce the cost to Rs. 1.5 per ton of basalt required. At the higher figure, the profit is reduced to Rs. 565 or Rs. 70 per annum per arpent (1.0430 acre).

Under a twenty-year plan, designed by Mr. P. E. Turner, the British West Indies are reported to have achieved excellent results in cultivation of better quality and yield of cane per acre. In Trinidad Limex gave response to 1.52 tons cane per acre from 5 cwt. dressing. Varying results were obtained with Nitrogen, Potash and Phosphates.

We suggest that the Ministries of Agriculture of various States, and the Indian Central Sugarcane Committee should devote their earnest attention to this matter, and take suitable steps to see that soil is not exhausted, by providing suitable fertilizers, etc. in various areas. For, yields have to be maintained and increased, if the industry in India is to progress and prosper.

CHAPTER 12

CANE DEVELOPMENT, RESEARCH AND MARKETING

Need for a Ten-Year Plan for Cane Development

The most important event from the standpoint of the sugar industry recently is the decision of the Government of India to withdraw tariff protection with effect from 1st April 1950, on the recommendation of the Tariff Board on the sugar industry. This is indeed a momentous decision,

* One Arpent = 1.0430 acre.

as momentous as the one in 1931 when the sugar industry was given protection, and is bound to have far-reaching consequences. The Tariff Board expressed the hope that the withdrawal of protection will make the three parties who are responsible for the efficiency of the industry (viz. the sugarcane farmer, the manufacturer and those charged with the responsibility of sugarcane research and development) shake off the attitude of complacency that the continuance of protection for the last 18 years has produced. In fact, every phase of the sugar industry so long as protection is in abeyance, will have to be keyed up to the highest efficiency to bring down the cost of production, and thus enable the Industry to face foreign competition on equal terms. While there is doubtless, some scope for improvement in every branch of the sugar industry, it is in the raw material and in sugarcane cultivation that there is the greatest scope and urgent need for improvement. So it is a special responsibility on those who are charged with the work of sugarcane research and sugarcane development as also on the sugarcane farmers to bestir themselves and see that sugarcane cultivation is put on a high level of efficiency and the cost of production of cane brought down in the shortest possible time.

Average Yield of Cane under Protection Period

The remarkable renaissance of the Indian Sugar Industry since the introduction of the protection is well known to all. Within a few years, there was considerable progress in all phases of the sugar industry. The average yield of cane went up from 14.1 tons in 1931-32 to 15.6 tons in 1936-37. The quality of cane also showed improvement and the recovery went from 8.69 per cent in 1934 to 10.28 per cent in 1942-43. But after this first spurt of improvement, there has been stagnation and even deterioration. It is not as if we have reached anywhere near the potentialities in respect of yield under our climatic and cultural conditions. There is still a very big gap between the yields of cane obtained in the Government Farm and on the estates of the big factories and the advanced cane growers, and those obtained by the petty or average cane grower who form the great bulk of our cultivators. The results of research and modern cultivation methods have touched only the fringe of the problem, and have not reached the great bulk of our cultivators. Mr. N. L. Dutt, Government Sugarcane Expert, feels that by well-planned intensive cane development we can increase the average yield of India almost two-fold in a period of 5 or 10 years. We agree with him when he observes: "Even if we achieve only 25% increase it will be a big thing but we should have definite targets before us to be attained in a fixed period of 5 or 10 years. The targets for the different provinces given in the following table are not impossible of achievement".

TABLE No. A

Table of Targets of Cane Yields per acre under 10-Year Plan

Province	Present yield per acre		Yield per acre to be attained in the I 5-year period		Yield per acre to be attained in the II 5-year period.	
	Mds.	(Tons)	Mds.	(Tons)	Mds.	(Tons)
U.P. ...	344	(12.74)	700	(26)	900	(33)
Punjab ...	280	(10.36)	700	(26)	900	(33)
Bihar ...	300	(11.13)	600	(22)	750	(28)
Bengal ...	383	(14.17)	750	(28)	900	(33)
Bombay ...	870	(32.20)	1,100	(40)	1,300	(48)
Madras ...	698	(25 84)	950	(35)	1,100	(40)
Orissa ...	548	(20.29)	800	(29)	1,000	(37)
Hyderabad ...	584	(21.60)	850	(31)	1,100	(40)
Mysore ...	488	(18.07)	950	(35)	1,100	(40)
Bhopal ...	192	(7.10)	600	(22)	750	(28)
Baroda ...	1,080	(40 00)	1,100	(40)	1,300	(48)

Need to link Sugarcane Competition with Costs and Sucrose Content

For any plan to be successful, there is urgent need for enlisting the full co-operation of the public. The enthusiasm of the whole country should be roused and every person who is engaged in the job should be infused with patriotic zeal and made to feel that he is doing a grand job for the country. In this connection, the prize competitions recently organised have a very great part to play. Though actual record yields have their own importance, they are not everything in these competitions. There is a need to collect as much data as possible on the various factors, such as variety, seed rate, spacing, tillering, height of cane and girth of cane manuring, irrigation, etc. as well as soil and climate that are responsible for the record yields that are obtained. These data should be statistically analysed and studied. It is gratifying to note that the Cane Commissioner of Uttar Pradesh and the Director of Sugarcane Research, Shahjahanpur, have agreed to study these data so far as Uttar Pradesh is concerned.

Main Aim should be to reduce Cost of Production and improve Quality

With a view to get the highest yield possible, enormous amount of manure and irrigation are applied without any consideration of cost and the cultivation expenses also are generally out of all relation to what is generally practised or practicable. The records obtained in such competitions are really creditable. In the recent prize plot competition organised by the Deccan Sugar Technologists' Association in Bombay, a record yield of 122.4 tons per acre has been obtained with the variety Co.419. This is indeed a very creditable performance being only a little short of the world record of 129.1 long tons in Mexico with POJ 2878

and 126.8 long tons of cane and 14.3 long tons of sugar obtained in Hawaii with H. 109. (The actual figures were 144.6 short tons in Mexico and 142 short tons of cane and 16 tons of sugar in Hawaii. The short ton is equal to 2,000 lbs.) But it should be studied whether there was any significant reduction in the cost of production of cane. It is reported that phenomenal amounts of manure were applied of the order of a top dressing of 1,000 lbs. N, over a basalt dressing of 50 tons F.Y.M. The cultivation expenses were also extravagant. The main aim should be to reduce the cost of production of cane and these prize competitions should also help in achieving that objective. The methods adopted in the competition or prize plots for getting very high yields should be capable of practical application in the ordinary fields. In these competitions consideration should be given also for the actual cost of production of cane, or it would be better to offer separate prizes for farmers who show the least cost of production of cane per maund.

It is well known that excessive manuring has a very adverse effect on the quality of cane. It might happen that because of this poor quality of cane the actual sugar per acre may be less in one case though the yields may have been boosted up by very heavy manuring. The quality of cane should also be taken into consideration when judging these competitions. In the recent prize plot competition held by the Deccan Sugar Technologists' Association in Bombay, mill tests were conducted in all the cases and the mill data as well as the expected recovery were recorded. It is essential that this procedure is followed in these competitions in Uttar Pradesh also. It is remarkable that in the competition held in Bombay when the record yield of 122.4 tons was obtained, the quality of cane was also satisfactory. The actual data in this individual case were as follows :—

1.	Yield of cane ..	122.443 tons or 3,329 mds.
2.	Pol. % cane	13.396
3.	Fibre %	11.582
4.	Purity mixed juice ..	85.89 %
5.	Expected recovery ..	11.542 %
6.	Sugar per acre ..	14.132 tons or 384 Mds.

The weekly recovery at the factory at the time these tests were made was 12.31% which showed that in spite of such heavy manuring (1,000 lbs. N top dressing over a basalt dressing of 50 tons F.Y.M.) and the heavy yields obtained the actual recovery and fallen by only 0.8 units. This is indeed a remarkable performance of the Co. seedling (Co. 419).

While it is undoubted that Tropical India is more suited for growing sugarcane as compared to North India which is sub-tropical, and it is possible to obtain larger yield per acre, it should not be forgotten that there are large contiguous areas of land where cane can be cultivated in North India, and due to research undertaken at Coimbatore, an entirely different type or species of sugarcane suitable for that area is grown in the sub-tropical North, and as such, the State of Uttar Pradesh, Bihar and also Punjab are eminently suited for growing this type of

sugarcane, particularly as the cost of cultivation is lower than in the tropical region. The canes that are successfully growing in U.P. at present are shown in the table below:

TABLE No. B

Canes Grown in U.P. in 1948-49 *

Co. Canes			Desi and others
Co. 312 Co. 313 Co. 421 Co. 453	Co. 290 Co. 331 Co. 395 Co. 356 Co. 527	Co. 393 Co. 370 Co. 213 Co. 244	Desi Co. S. 109
Occupying over 200,000 acres	Occupying less than 100,000 but over 30,000 acres	Occupying less than 30,000 but over 5,000 acres	

* Please see Note on the latest Memorandum on varietal position in India at the end of this Chapter No. 12.

The crucial factor is the cost of production per maund of cane and in this respect the North Indian areas have a definite advantage. Prize competitions of the type that have been organised in Uttar Pradesh show a sense of awakening and should rouse interest. Such competitions are, therefore, very welcome and should become a regular annual feature. It is hoped that in the future competitions due attention will be paid to (1) cost of production per maund of cane and (2) sucrose content of cane.

Higher Yield gives greater Profits and lower Costs

It is obvious that the sugarcane farmer instead of making special pleas for raising the price of cane should concentrate on increasing his yield per acre and thus get more profit per acre and leave it to Government to fix a reasonable price. This point needs particular mention in Uttar Pradesh and Bihar because the cane prices fixed in these two States have their repercussion in other States also irrespective of whether the cost of production per maund is more or less. So far as the sugarcane farmer is concerned we feel convinced that the emphasis on his part must shift to realising higher yields per acre and thus higher profit per acre than clamouring for higher prices. Fortunately, sugarcane far more than other crops, responds very well to manuring and better methods of cultivation. The labour and money spent on these improvements are well repaid by higher yields and greater profit. It is not objectionable therefore if the cultivators clamour for facilities to obtain higher yields and thus earn a higher margin of profit. The point

is well illustrated by Mr. N. L. Dutt in the paper he read at the Sugarcane Conference held at Lucknow on the 7th May 1950 under the auspices of the Cane Development, U.P.:

"Assuming that the cost of production per maund in Uttar Pradesh is Re. 1-2-0 and that the yield of an average farmer is only 300 mds. per acre, if the price per maund of cane is Re. 1-10-0 the margin of profit to him is 8 as. per maund and he makes a total profit of Rs. 150 per acre. Now let us assume that by proper cane development he has increased his yield of cane per acre to 500 mds. This should normally lower his cost of production per maund of cane but for the sake of argument let us say that his cost of production still remains the same, viz. Re. 1-2-0 per maund. If the price of cane is fixed at only Re. 1-8-0 thus reducing his margin of profit to only Re. 0-6-0 per maund, even then with this lower price of cane he will make a total profit of Rs. 187 per acre as against Rs. 150 per acre with a price of Re. 1-10-0 per maund."

It is hoped that the sugarcane farmer, in the interest of bringing cane agriculture and thus the sugar industry to a higher pitch of efficiency will learn a valuable lesson from this prize competition which has proved conclusively that higher yields can be obtained in Uttar Pradesh and will endeavour to draw more and more upon the experience of the Cane Development Department and get higher yields and thus lower the cost of production. We also trust that the Agricultural Department will take special care to see that the result of research are translated to the cultivator's field.

The problem of fixation of cane prices has proved to be a thorny problem during the last few years. But, if the point explained above is fully grasped, there is no reason why fixing of equitable price to the satisfaction of the cane grower, the manufacturer and ultimately the consumer should prove very difficult, and this can be left to the Government who will no doubt keep the interests of the grower, manufacturer and the consumer in view.

Sugarcane—Its Development in U.P. in 1948-49

We give below an official note sent to us by the Cane Commissioner, U.P., on August 24, 1950, on the sugarcane development and marketing in U.P. in 1948-49 :—

(a) **Object: To make Factories Self-Sufficient:**

With a view to make the sugar factories self-sufficient within their own gate areas, it was considered essential to pay special attention on intensive cultivation of sugarcane at gate rather than unduly expand the area. The object was proposed to be achieved through providing the cultivators with seeds of healthy and disease-free varieties suited to the locality, suitable manures and fertilizers at cheap rates, improved agricultural implements and other facilities.

The work of cane development was mainly concentrated in gate areas of sugar factories where it was organised and controlled with the co-operation of cane development councils set up by the Department at each factory gate. Intensive cultivation was carried on in the 2,000 acre blocks formed at each factory gate. These blocks were put in charge of one unit of development staff consisting of an Assistant Cane Development Officer, three supervisors and nine Kamdars. The general development of the area outside the blocks was carried on by the other Government and Society staff. In all, there were 65 development councils in the State.

(b) **Improved Methods of Cane Cultivation:**

In 1948-49, great stress was laid on the introduction of large number of half-field trials and demonstrations on cultivator's fields in order to afford a comparative study of the results obtained from the grower's normal methods and those advocated by the Department. 8,221 trials of this nature were laid on the cultivators' fields to demonstrate the effect of sowing suitable varieties in different areas, improved cultural practices and optimum dose of manure, etc. 21 varietal, 12 manurial and 7 ratooning trials were also laid separately on a more elaborate scale. In addition, zonal trials were laid at representative centres to test the new seeds and cultural practices, etc. under local conditions.

(c) **Cane Seed Distribution and Varietal Replacement:**

In planning the cane sowing programme, replacement of low-yielding, disease-bearing and unimproved varieties by high-yielding, resistant and improved varieties received particular attention. Accordingly, 19.9 lakh maunds seed of improved varieties was distributed this year as compared to 16.8 lakh maunds of last year. Out of the total distribution, 14.47 lakh maunds was distributed in gate areas and 5.5 lakh maunds at out-stations.

(d) **Manuring:**

. Cakes and fertilizers were largely used as manure. The total amount of such manure distributed during the year was 5.08 lakh maunds as compared to 3.7 lakh maunds of last year, which marks an improvement to the extent of 70 per cent. The manures included 15,246 maunds of sanai seeds, 1,85,582 maunds of cakes and 3,06,702 maunds of fertilizers. In order to popularise the use of compost-making in villages, 63,150 pits were dug, 51,701 filled and 59.06 lakh maunds of compost prepared. Similar work was done at factory gates also by utilising all available wastes, sweepings, cattle dung, cattle urine, earth and press-mud, etc. Here 1,690 pits were dug, 1,519 filled and 6.55 lakh maunds of compost prepared thus making up a total of 65.61 lakh maunds compost. An amount of Rs. 86,296 was allotted as subsidy on both village and factory yard compost.

(e) **Distribution of Improved Implements:**

A wide propaganda was made to persuade the cultivators to use improved agricultural implements. The total number of such imple-

ments distributed during the year was 24,049 against 13,633 in 1947-48. This showed an increase of 76 per cent over previous year's working. 73 per cent of the total distribution done during the year 1948-49 was in factory gate areas and the rest at out-centres.

(f) **Irrigation:**

A substantive portion of the area under cane suffered from lack of adequate irrigation facilities. Though it was not found practically possible to improve irrigation facilities on any large scale, efforts were made to improve the existing resources within the limited means available. 267 wells were sunk, 134 bored, 275 tanks dug and repaired and 86,000 yards of guls cleared to facilitate proper irrigation of sugarcane crop. Lack of irrigation means had been a great handicap in securing good results in the development of sugarcane along proper lines.

(g) **Cane Pests and Diseases:**

Red-rot, pyrilla and borers were the chief pests and diseases which attacked the cane crop during the year under report. Their attack was, however, not so severe as in 1947-48. An area of 4,414 acres only as compared to 28,198 acres of last year was affected. Out of this, 3,437 acres was controlled by the Cane Protection Inspectorate of the Department.

(h) **Publicity and Propaganda:**

Besides field demonstrations on timely planting, line sowing, trench sowing, proper ratooning and manuring, etc., agricultural exhibitions, shows, demonstrations, group meetings and competitions were arranged in 75 zones to educate growers on proper methods of cane cultivation. 3,573 demonstrations regarding the use of various implements were held in the fields of growers. The number of other demonstrations given was 5,363. 399 group meetings were convened and 285 competitions held. Pictorial illustrations of the improved methods of cane cultivation were given to the public through cinema films projector, amplifier, etc. Such shows were held at agricultural exhibitions organised during the year. The Department for the first time prepared three films on the different aspects of cane cultivation and released them for public exhibition through the departmental publicity vans. Intensive publicity work was done at factory gates where cane growers brought their cane. At most of the gate-councils fully equipped sets of one radio, one amplifier, one film-projector 6 volts battery, one gramophone and one microphone along with Dunlop Publicity carts have been provided for regular programmes at the factory gate as well as periodical programmes in the villages. The Cane Development Councils wroking in factory gate areas were able to implement the various items of development and the progress in respect of distribution of manures, fertilizers and improved implements, etc. showed a marked improvement over last year.

Sugarcane Marketing in U.P. in 1948-49

Noori Sugar Works, Bhatni, and Pipraich Sugar Mills, Pipraich, did not work during the 1947-48 season, but they worked during the year 1948-49. Thus out of 68 sugar factories, 65 worked during 1948-49 against 63 of the previous season.

Against 10.25 lakh acres of the previous year, the total area reserved for sugar factories during the year 1948-49 was 10.36 lakh acres of which 9.67 lakh acres was under the command of Co-operative Societies. The yield, however, varied from region to region and tract to tract. The average yield, however, remained the same as 1947-48, i.e. 286 maunds per acre. The average sugar recovery showed little improvement over last year's and increased from 9.83 to 9.92 per cent during the year. The total quantity of cane crushed by the factories in Uttar Pradesh, however, decreased to 1446.46 lakh maunds as against 1668.68 lakh maunds of the previous year reducing the length of crushing season from 114 of the previous season to 98 days during the 1948-49 season.

The drop in crush was due to several reasons. Due to reduction in price of sugar, factories were reluctant to crush more cane particularly from out-stations. Difficulty in transport of sugar in hand and imposition of certain restrictions on its movement left the factories with little space in their godowns for storage of new sugar which contributed to some extent in diminishing the crush. Exceptionally high gur and khandsari prices during each part of the season and a fall in price of cane from Rs. 2 to Re. 1-10-0 per maund were also contributing factors to the decrease in crush.

Though normal facilities required for transport of cane were provided by the Railways, yet in effect the services were irregular and inefficient on some Railways, and there was a general complaint from factories about irregularity in the running of the cane pilots and in supply and clearance of cane wagons. The percentage of cane transported by rail showed a decrease from 31.08 of the previous year to 27.4 for the year under report. The supply of wagon to indents was 86 and 88.8 per cent on O.T. and E.I. Railways against 85.5 and 92.35 per cent of the previous year.

As usual the sugar factories arranged their supplies of sugarcane either directly where there were no co-operative societies, or through co-operative societies. Out of the total crush of 1446.46 lakh maunds of cane, the latter supplied 1,218 lakh maunds which roughly works out to 84 per cent of the total crush against 80.7 per cent in the year 1947-48. The total number of cane co-operative unions remained at 99 as in the previous year. Their area of operation extended to over 24,011 villages with a membership of 10,08,430 individual and 2,566 society members as against 23,927, 9,78,043 and 1,784 respectively during the previous year. Their working capital increased from Rs. 112.8 lakhs to 159.9 lakhs, the reserve and other funds from Rs. 76.90 lakhs to 107.20 lakhs. The owned capital is now 67.0 per cent of the working capital as against 66 per cent

of the previous year. The net saving due to expenditure rate being higher than the income rate fell from Rs. 25.40 lakhs in the previous year to Rs. 17.45 lakhs during the year under report. The paid-up share capital held by the Unions at the end of the year amounted to Rs. 28,97,714 showing an increase of Rs. 6,03,031 over the figures of the last year.

Loans amounting to Rs. 81,27,845 were advanced to members for productive purposes. Recoveries from members were rather poor. An interest-free loan of Rs. 6,00,000 was granted by Government to the Union to meet the agricultural requirements of the members but the help was too inadequate on the needs. These societies are playing an important role in the unions of development and marketing of sugarcane. The usual breaches of the rules mostly detected at the out-stations were relating to under-weighments, detention of cane carts, inequitable purchases of cane and irregular payments of cane price. A special feature of the year was the introduction of a system by which active participation of local officials and non-officials was secured for the administration of Sugar Factories Control Act and Rules and Checking Corruption and Malpractices. With the co-operation of Divisional Commissioners and District Officers, a Special Cane Officer was appointed in each cane growing district from among Sub-Divisional Magistrates and Deputy Collectors. The non-officials were invested with necessary powers under Rule 19(5) for the purpose. Squads were organised for checking weighment and payment work at purchasing centres.

The sugar factories were reported to be in financial distress. A sum of Rs. 407.26 lakhs was in arrears at the end of the year on account of cane price. In order to enable the factories to tide over this financial crisis, Government allowed postponement of payment of cane cess for varying periods to 31 factories.

Latest Memorandum on Varietal Position in India in 1948-49

According to the latest Memorandum published under the name of Shri N. L. Dutt, Government Sugarcane Expert, Sugarcane Breeding Station, Coimbatore (India), by the Indian Central Sugarcane Committee in August 1950, the position occupied by the improved varieties was determined. It referred to the year 1948-49 and was based on information supplied by the Directors of Agriculture of various States of the Indian Union. The information for States of Assam and Orissa is appropriate, while that for Bengal and Madhya Pradesh (U.P.), Bihar, Punjab, Madras, and Bombay as also Hyderabad and Mysore is fairly accurate:

Of the total area of 3,674,000 acres under various sugarcane varieties in the Indian union during the year 1948-49, about 50 per cent, viz. 2,067,778 acres was concentrated in U.P.; 420,240 acres in Bihar; 299,324 acres in Punjab; 219,118 acres in Madras; 139,147 acres in Bombay (Deccan: 106,597, South: 22,657, Gujerat: 9,893 acres); 95,974 acres in Hyderabad; 65,700 acres in Bengal; 62,100 acres in Orissa; 55,200 acres in Mysore. The all-India verified area was 3,410,492 acres out of the total

area of 3,674,000 acres under various varieties in the Indian Union. In U.P. the verified area was only 1,950,816 acres out of the total of 2,067,778 acres.

Of the total under varieties, 31.16 per cent (1,062,728 acres) was under Co 312; 11.90 per cent (405,562 acres) was under Co 421; 10.19 per cent (347,892 acres) was under Co 313; 10.79 per cent (368,176 acres) was under Co 419; and 6.5 per cent (221,874 acres) was under Co 453 variety. The area under other varieties was from 2.94 per cent to 0.01 per cent.

Research and Development Work in Bihar in 1949-50

The present research organisation is gradually coming into its own in the State of Bihar and under its auspices the work done recorded an improvement over that of the previous year. Varietal position recorded a satisfactory improvement and the State recovered on an average 47 mds. (1.8 tons) more yield per acre compared to that in 1948-49, the factory estates recording an average of 7.3 tons per acre and a maximum yield of 39.8 tons per acre.

The salient features of the work done are given below:

(1) *Cane Agronomy (varietal)*:

B.O. 11 excelled all early varieties in respect of yield (605 per acre) showing at the same time a high sucrose level (17.39%), while Co 453 proved the highest yielder (702 maunds per acre) among the mid-early and main season varieties.

Manurial: In the NPK trials, a clear response to Nitrogen (as ground cake) was recognised, the optimum dose from yield considerations appeared to be 40 lbs. N per acre. No significant conclusions resulted from trials on the mode of application of manures (mustered cake and ammonia sulphate in five different ways).

Cultural: In time of planting trials, October, November and February plantings gave similar results, March planting proving definitely disadvantageous.

(2) *Cane Botany*:

Pith and cavity development varied directly with relative growth rate in the cases of Co 285, Co 393, and Co 513, but showed an inverse relationship in Co 213, Co 313 and Co. 331. Rind hardness studies showed Co 453 and B.O. 21 to possess respectively the hardest and softest rind of all varieties examined. B.O. 11, and B.O. 24 and Co 453 exhibited greater susceptibility to pyrilla infection as compared to B.O. 3, B.O. 10 and Co 313.

(3) *Cane Physiology*:

Irrigation alone gave better yields than manuring without irrigation.

(4) *Cane Chemistry* :

Juice quality level, on an average was inferior (by over 1.0 per cent) to that of the last year (1948-49).

(5) *Soil Survey and Management* :

A study of base exchange capacities in four zonal soil types showed that in heavy clay types, the exchange capacities were more than double those in calcareous, non-calcareous and alluvium types.

(6) *Gur Chemistry* :

The inherent gur qualities of eleven varieties were under examination during the year and Co 313 and Co 513 proved outstanding with highly crystalline product of golden yellow colour.

(7) *Entomology* :

In studies on comparative incidence of borers, Co 313 was generally most susceptible to top borer, Co 453 proving the most resistant. With regard to stem borer, B.O. 10 and B.O. 11 were most susceptible while B.O. 21 was usually most resistant.

CHAPTER 13

COST OF CULTIVATION OF CANE

Cost of Cultivation of Cane—Enquiry Essential

The basic weakness of the Indian sugar industry lies in the extraordinary high cost of sugarcane. No enquiry has been made in recent years to find out the cost of cultivation of sugarcane in U.P. and Bihar, which produce nearly 75 per cent of the sugar of the country. In view of the fact that cane price fixed in these States has a direct bearing on the fixation of sugar price throughout the country, it is a pity that no serious attempt has been so far made to arrive at the actual cost of production of cane. Isolated attempts have been made in different places like the Sugar Research Station at Shahjanpur and Pusa, but these attempts have their weakness and defects as they relate to only ideal conditions divorced from actual conditions. In the absence of such data, it is pertinent to note that the fixation of cane prices in U.P. and Bihar largely depends upon the price of gur and upon factors responsible for stimulating supplies to sugar factories. The prices of alternate crops like wheat, etc. also affect the fixation of cane price. The data compiled by the Indian Council of Agriculture in 1934 has now become completely out of date. The 1937 Tariff Board fixed the cost of cultivation per maund of cane to be Re. 0-3-7 in U.P., Re. 0-3-4 in Bihar, Re. 0-7-0 in Bengal, Re. 0-5-10 in Bombay, Re. 0-5-5 in Madras, etc. Due to the

extraordinary rise in the price of various commodities, the cost of cultivation of cane went up tremendously during the next six years and the price of cane was raised from Re. 0-10-0 in 1943 to Rs. 2-0-0 in 1947-48, to Re. 1-13-0 in 1948-49 and Re. 1-10-0 in 1949-50 in U.P. The price fixed for the season 1950-51 is Re. 1-12-0. Although the Tariff Board in 1950 as well as in 1949 recommended a reduction in the minimum price of cane from Re. 1-10-0 to Re. 1-4-0 per maund, by stages, the Central Government, on a review of present circumstances, have not found it feasible or practicable to implement this recommendation, and consequently the price of sugar has had to be raised from Rs. 28-8-0 per maund to Rs. 29-12-0, and later in the season to a maximum of Rs. 33-0-0 per maund in 1950-51, in certain areas of Bihar.

In July 1949, the Government of India appointed a Technical Committee on sugarcane to inquire into the cost of production of sugarcane in different parts of the country, to review the progress of cane research and development and to suggest ways and means to achieve quicker results in increasing the yield of cane per acre and the sugar content of cane with a view to ultimately reducing the cost of production of sugar. In September 1949, the Committee issued a detailed questionnaire on the subject. We understand that in December 1949, the Committee submitted an interim report of 300 pages and gave some tentative figures of the cost of production of cane which may be adopted by the Tariff Board for the purpose of their report. We have not still had a copy of this report. The Tariff Board of 1950 was, however, given an idea of the costs estimated by the Committee, before they submitted their report. We feel however an enquiry of such a summary nature cannot yield results which would be statistically sound and unassailable. We are convinced that a full-fledged inquiry on this subject on the accepted scientific methods of investigation would take at least two to three years. We suggest that such a comprehensive and detailed inquiry should be undertaken before long as it would be very useful for the purpose of chalking out a suitable policy in relation to the price of sugarcane, which is presently fixed on *ad hoc* basis. We also suggest that the interim report of the Technical Committee should be published, and the Committee should be asked to undertake a comprehensive inquiry into the question of the cost of cultivation of sugarcane on a long-term basis.

Cost of Cultivation of Cane in Madras—1947-48 and 1948-49

We have, however, some information on the subject from an attempt made by the Indian Institute of Sugar Technology for determining the cost of cultivation of cane per acre of an ordinary ryot in Madras, which, though subject to the aforesaid defects, should serve to give some idea of the cost of production of sugarcane in Madras in 1947-48 and 1948-49. The figures in Table A are taken from Appendix II-B of their report published in "Proceedings of the Seventh Annual Convention of the Sugar Technologists' Association of India Part II".

TABLE NO. A

Cultivation Costs of an Ordinary Ryot per acre in Madras

	Propped		Unpropped	
	Plant	Ratoon	Plant	Ratoon
	Rs. as. ps.	Rs. as. ps.	Rs. as. ps.	Rs. as. ps.
Land preparation	50 0 0	......	50 0 0	......
Seed material *3 tons @ Rs. 50 per ton* ...	150 0 0	......	150 0 0	......
Planting, 25 Coolies	25 0 0	......	25 0 0	......
Manures	150 0 0	150 0 0	100 0 0	100 0 0
Manuring	10 0 0	10 0 0	10 0 0	10 0 0
Hoeing, 2 times at 20 Coolies each time @ Re. 1 each	40 0 0	20 0 0	40 0 0	20 0 0
Trenching, 2 times at 20 Coolies each time @ Re. 1-8 each	60 0 0	30 0 0	60 0 0	30 0 0
Propping and wrapping 5 times, 65 Coolies @ Re. 1-4 each per day ...	206 4 0	206 4 0	......	......
Bamboos *4,000 @ Rs. 120 per 1,000* distributed over 3 years	160 0 0	160 0 0	......	......
Irrigation	10 0 0	10 0 0	10 0 0	10 0 0
Harvesting @ Rs. 3 per ton ...	120 0 0	105 0 0	75 0 0	66 0 0
Cart hire @ Rs. 4 per ton	160 0 0	140 0 0	100 0 0	88 0 0
Establishment charges	25 0 0	25 0 0	25 0 0	25 0 0
Land rent	200 0 0	200 0 0	200 0 0	200 0 0
Levelling	......	25 0 0	......	25 0 0
Total ...	1,366 4 0	1,081 4 0	845 0 0	574 0 0
Estimated yield	40 tons	35 tons	25 tons	22 tons
Estimated cost per ton	34 2 6	30 14 3	33 12 10	26 1 5
Factory price per ton	42 0 0	42 0 0	42 0 0	42 0 0

The above Costs apply for both the Seasons 1947-48 and 1948-49.

Net profit per ton	7 13 6	11 1 9	8 3 2	15 14 0
Net profit per acre	313 12 0	388 14 0	205 7 6	350 1 0
Cost per md.	1 4 1	1 2 2	1 3 10	0 15 4
Factory price per md.	1 8 8	1 8 8	1 8 8	1 8 8
Net profit per md.	0 4 7	0 6 6	0 4 10	0 9 4

The above figures reveal that the profit per maund of cane earned by cultivators in Madras varies from Re. 0-4-7 to Re. 0-9-4.

A similar survey is intended to be conducted in a few northern sugar factories during the 1949-50 season.

According to the Table A, it will be evident that on the basis of cane prices available in 1947-48 and 1948-49, the net profit per ton varied and was Rs. 7-13-6 for propped plant, Rs. 11-1-9 for propped ratoon, Rs. 8-3-2 for unpropped plant and Rs. 15-14-0 for unpropped ratoon, while the net profit per acre was Rs. 313-12-0 for propped plant, Rs. 388-14-0 for

propped ratoon, Rs. 205-7-6 for unpropped plant and Rs. 350-1-0 for unpropped ratoon. This comes to cost per maund as Re. 1-4-1 for propped plant, Re. 1-2-2 for propped ratoon, Re. 1-3-10 and Re. 0-15-4 for unpropped plant and ratoon and the net profit per maund Re. 0-4-7 and Re. 0-6-6 for propped plant and ratoon and Re. 0-4-10 and Re. 0-9-4 for unpropped plant and ratoon. The estimated yield was 40 tons and 35 tons for propped plant and ratoon, and 25 tons and 22 tons for unpropped *plant and ratoon in Madras which compares unfavourably with the high* yield of 62.1 tons in Hawaii, 41 tons in Peru, 30.4 tons in Egypt, 56.2 tons in Java, though it is better than 21.1 tons in Australia, 27.1 tons in Philippines, 10.6 tons in Mauritius and 17.1 tons in Cuba. It is obvious that if the yield per acre were increased the cost of cane per maund should be below that which is available now.

The above estimate of the net profit is based on the factory price of Rs. 42 per ton or Re. 1-8-8 per maund of cane. When the price stands today increased to Re. 1-12-0 in the 1950-51 season, the net profit, assuming there is no appreciable increase in the cost of raw material, is Re. 0-7-11 and Re. 0-9-9 for propped plant and ratoon and Re. 0-8-2 and Re. 0-12-8 for unpropped plant and ratoon in Madras. The net profit to the cultivator can be said to have increased considerably even assuming that there has been an increase in the charges for the raw material required.

Cost of Cultivation varies from State to State

The cost of cultivation of cane varies from State to State as well in different tracts in the same State. It depends on many factors, the most important of which are climate and soil factors, as well as the availability or otherwise of irrigation, manurial and other facilities. The average cost of cultivation of cane, according to the figures supplied by the Indian Central Sugarcane Committee, in its 1948-49 report, can be taken roughly as follows in various sugarcane-growing States :—(See Table No. B on next page.)

Smaller area can give larger quantity of Cane

The area under sugarcane in India has been varying from 3.5 to 4.5 million acres, depending on prices of cane and gur in relation to all alternative crops and possible climatic conditions at the time of planting. *It is pertinent to note that though the sugarcane area in the country constitutes only 2 per cent of the area under foodgrains, no other country in the world has an equal area under sugarcane.* The cane crop in the dominion of India in 1948-49 was 37.9 lakhs acres and in 1949-50 it was 36.41 lakhs of acres. It does not appear to be necessary to increase the area any further though the need for improving the yield per acre can be said to be urgent and imperative. The yield, however, is very small, the all-India average yield being only 14 to 15 tons per acre as compared with 56 tons in Java. There is thus scope for a great improvement in the yield of cane per acre in India. According to the Government Sugar-

TABLE No. B

Average Cost of Cultivation per acre in different States in India

State	Total Cost per Acre in Rupees	Average Yield per Acre in maunds	Average Cost of Cultivation per maund
	Rs. a. p.		Rs. a. p.
United Provinces—			
1. Western ...	596 15 0	490	1 4 0
2. Central ...	562 9 0	470	1 3 2
3. Eastern ...	512 13 0	430	1 3 1
Bihar ...	566 12 0	380	1 7 10
Madras ...	1,130 7 7	1,053	1 1 2
Bombay ...	1,151 10 0	1,120	1 0 6
C.P. ...	503 8 0	300	1 10 10
Orissa ...	580 0 0	500	1 2 7
East Punjab ...	471 0 0	350	1 5 3
W. Bengal ...	861 0 0	528	1 10 1

cane Expert who carried out a survey of the sugarcane research and development in 1945 it should be possible to increase the yield of cane to 800 maunds in U.P., Punjab and Bengal, 600 maunds per acre in Bihar, and 1,100 maunds per acre in the tropical areas within a period of five years. There are many who feel that the estimates are on the lower side. The special officer, Dr. W. Burns, an Agricultural Commissioner of the Government of India, appointed by the Government in 1943 to report on the technological possibilities of agricultural development in India stated that there was no doubt that the average yield of cane in India could be forced much higher than it was then, particularly in areas where the climate was suitable. He estimated an average yield of about 40 tons per acre for the whole of India. *It is apparent from this that the yield of sugarcane in India, as a whole could be doubled at least, with a proper development,* in the near future. In 1943-44, an area of 4 million acres produced 59 million tons of cane and if the Government sugarcane expert's estimate is accepted, the same area can produce 124 million tons of cane within 5 years, provided all facilities are available. Thus there is a great scope for future improvement in sugarcane yield in the country and under an improved and organised system of cane cultivation, the present requirement of the industry of 50 to 60 million tons of sugarcane can be made from a smaller area of land than at present and it would be possible to divert larger areas of land now under cane to food crops in view of the great necessity of increasing food production in the country. Some help in this direction can also be had from the production of palmyra sugar, to which we have made a reference in a chapter on that subject.

As the major item in sugar price is cane which constitutes generally 60 per cent of the price of sugar, it is necessary to bring down the cost of cane to bring down the sugar price in parity with other countries of the world.

Detailed recommendations for increasing the acre yield have been made in this behalf in our section " Agricultural Problems of the Sugar Industry " and these deserve to be implemented at once by the Indian Central Sugarcane Committee. The following defects require careful attention in this connection :—

(1) Lack of permanent or even long-term reserved areas for the factories in U.P. and Bihar.

(2) Lack of systematic plan for utilisation of accumulated funds of co-operative societies.

(3) Lack of concentrated attention to cane development work as compared to cane marketing work. (In U.P. the same staff does the work of development and marketing.)

(4) Lack of fertilisers, irrigation, co-operation, etc.

(5) Lack of association of manufacturing interests with research work on cane development.

(6) Difficulties in acquisition of land adjoining the factories in U.P. and Bihar.

A survey of the work of the research carried on so far in various States shows that agricultural improvement has so far been negligible, and this is due to lack of team-work, lack of adequate financial assistance and lack of a well-planned organisation. For instance, liberal funds are not provided for translating the results of research to the fields of cultivators and the assistance of manufacturers is not sought. This is vital for achieving satisfactory results.

CHAPTER 14

SUGAR INDUSTRY IN VARIOUS STATES IN THE INDIAN UNION AND IN PAKISTAN

A Note on the Sugar Industry in Bombay State

Sugar production in the Bombay State showed a fall by 1.5 per cent in the 1949-50 season below that of the previous season 1948-49, the production in 1949-50 being 1,11,225 tons as against 1,13,002 tons in 1948-49. The total number of working factories was 14 in 1949-50 as against 13 in 1948-49. The average number of working days was 116 in 1949-50 as against 136 in 1948-49. The total cane crushed was 937,000 tons and the sugar recovery 11.84 per cent in 1949-50 as compared with about 943,000 tons cane crushed and sugar recovery 10.83 per cent in 1948-49. The

molasses obtained were 34,000 tons and the recovery of molasses per cent cane was 3.64 in 1949-50 as compared with 31,000 tons and 3.91 per cent respectively in the previous season. The consumption of sugar in the Bombay State for a population of 3.32 crores at the rationing rate (at 18 lbs. per head per year for the city of Bombay with an estimated population of 32 lakhs and at the rate of 12 lbs. per head per year for the rest of the Bombay State with an estimated population of 300 lakhs) was 185,000 tons in 1949-50 and the State was required to import sugar from outside to make up the deficit to save the rationing system from a break-down.

We have been stressing that Bombay being situated in the tropics affords the proper place for further development of the sugar industry. Besides better recovery, the yield too per acre is better in Bombay than in other States. The average yield per acre in 1948-49 was 31.9 tons as compared with 11.7 in U.P., 9.8 in Bihar, 27.7 in Madras, 13.7 in West Bengal, 11.3 in East Punjab and an all-India average of 13.7. It is because of this higher yield, higher recovery which go to prove the superiority of the sugar industry in the Bombay State that the sugar industry in the State has been making greater profits. The net profit per maund of sugar in Bombay in the post-war period (1945-46 to 1946-47) was Rs. 4-6-3 as compared with Re. 0-15-11 per maund in U.P., Re. 0-6-1 per maund in Bihar, Rs. 3-8-0 per maund in Madras. During the decontrol period, the profit per maund in Bombay was Rs. 14-8-8, in U.P. Rs. 2-12-5, in Bihar Rs. 3-10-6 and in Madras Rs. 3-14-2.

A cane cess has been levied in the State at the rate of 3 annas per maund since 1st January 1948. The total income from cane cess in Bombay in 1948-49 was Rs. 41.8 lakhs, in 1949-50 Rs. 50 lakhs, in 1950-51 Rs. 44.0 lakhs and in 1951-52, Rs. 43 lakhs (*vide* Budget proposals for the year 1951-52).

On 2nd February 1951, it was reported in early 1951 that the Bombay Government has granted permission to start six new factories in the State. When they go into production they are expected to increase the production by 40,000 tons. The total production in the State is expected to be increased to 1.5 lakh tons as against the requirement of 1.8 lakh tons at the present rationing rate. Still the State will have a deficit of about 30,000 tons, and if there is no appreciable improvement in other ways, the Bombay State will be required to import about 30,000 tons as against 65,000 tons to 75,000 tons today.

Note on the Sugar Industry in Mysore State—1949-50

The season 1949-50 was one of extraordinary difficulties for the sugar industry in Mysore and the production of sugar registered an unexpected and sharp decline.

The Mandya Sugar Factory, which is the only factory producing white sugar in the State, started crushing operations on the 20th October 1949, within three months of the close of a long and strenuous season of 341 days for which the factory worked in the year 1948-49. On the basis

of the acreage planted with cane in the year 1948, the production of sugar was estimated at 22,000 tons as against the actual production of 27,321 tons in the preceding season. But the unprecedented phenomenon of the depletion of the Krishnaraja Sagara Reservoir and the drying up of the canals from the beginning of 1950 upset all previous calculations and stood in the way of the factory achieving the target of production. The absence of irrigation water adversely affected the condition of the crops and led to a rapid fall in recovery. The failure of water supply to the factory towards the end of April 1950, aggravated the situation and brought about a sudden and unexpected stoppage of crushing operations. By this sudden closure of the factory, nearly 1,500 acres of ripe cane was left over, exposed to drought. The owners of the cane were, however, permitted to utilise the cane for manufacture of jaggery which turned out to be a profitable proposition in view of the high price prevailing for that commodity. Still a portion of the cane completely dried up causing loss to the growers. As soon as water supply became available, the factory resumed crushing in the last week of July and worked for nine days to finish off whatever cane was still available. *The actual number of days for which the factory worked during the season was only 186.* During this period a total quantity of 1,75,822 tons of cane was crushed, giving an yield of 16783.5 tons of sugar. The corresponding figures for the previous season were 3,18,305 tons and 27321.4 tons respectively. The recovery at 9.54 per cent showed an improvement over that of the previous year. During the year, 9,578 tons of molasses were obtained, the greater part of which was made use of in the Company's Distillery for the manufacture of Power Alcohol, industrial spirits and portable liquors. (See Table No. A on next page.)

The cane price for the season 1949-50 was not fixed till 2-9-50 by the Government. The problem of fixing a fair price for cane is complicated by the demand of the cane growers for relief on account of loss of their cane due to drought. The question of loss to cane growers and relief due to them was being examined by a Committee appointed by Government for the purpose.

Following the Government of India's decision to re-impose control on sugar, the Government of Mysore also passed a Sugar Control Order and froze the stocks lying with the factory and wholesale dealers as on the 2nd September 1949. The control price of sugar was fixed on the all-India level and the distribution of sugar in the State was taken over by the Director of Food Supplies. The system of sugar rationing was working satisfactorily and the public was assured of the minimum requirements of sugar at control price.

Power Alcohol Manufacture

The Power Alcohol scheme which was in operation in the State ever since 1939 with one or two interruptions for brief periods was suspended again from the beginning of the year 1950. The major obstacle that stood in the way of continuance of supplies of alcohol for purposes of admixture with petrol was the prohibitively high rate of handling charges demanded

TABLE NO. A

Sugar Production in Mysore, 1947-48 to 1949-50

—			1949–50	1948–49	1947–48
1.	Production of sugar (tons)	...	16,783.5	27,321.4	17,357.0
2.	Total cane crushed (tons)	...	175,822	318,395	187,810
3.	Recovery Percentage	...	9.54	...	...
4.	No. of Factories	...	1*	1	1
5.	Duration of the Season	...	186	341	238
6.	Acreage under cane cultivation	...	...	8,000	12,500
7.	Cane:				
	(a) Price (per ton)	Rs. ...	40 0 0	44 8 0	44 8 0
	(b) Percentage of cane price to sugar price	...	...	60	60
8.	Cess:				
	(a) Rate per ton	Rs. ...	3 0 0	6 0 0	6 0 0
	(b) Total cess collected	Rs. ...	...	†30 lakhs	...
9.	Molasses obtained (tons)	...	9,578	...	...
10.	Labour:				
	(a) Number	...		300–400	300–400
	(b) Wages extra (c) Welfare (d) Dearness allowances	Rs. ...	...	‡6.5 lakhs	...
11.	Manufacturing cost:				
	(a) Total	Rs. ...	...	...	...
	(b) Percentage to price	Rs ...	...	...	...
12.	Profit:				
	(a) Gross profit	Rs. ...	24,90,023	36,35,846	25,48,040
	(b) Net profit	Rs. ...	8,82,461	10,86,316	...

* The same factory at Mandya has besides a scheme for expansion to 2,000 tons capacity of another factory at Shimoga.

† This amount represents cess collected for two years—1947-48 and 1948-49.

‡ This figure includes the total spent by the factory on extra wages Rs. 5 lakhs beyond revised wage schedule and other labour welfare activities.

by the petrol companies. After meeting the central excise duty of 15 annas per gallon and the high rate of handling charges demanded by the petrol companies, the margin that was left to the Distillery was barely adequate to meet the actual manufacturing cost and denaturing expenses. However important the power alcohol industry is in the national economy of the country, it must be noted that its future will be poor indeed unless the manufacturer of this product is able to realise a fair price for it and is given the requisite incentive.

Sugar Industry in Madras—1949-50

The area under sugarcane in Madras State in 1949 was estimated at 1,90,640 acres showing a reduction of 8.7 per cent compared with the

estimated acreage in the previous year. Drought over a large area and a cyclone in the Andhra districts affected the yield.

After re-imposition of the control on sugar in September 1949, gur prices rose steadily. In response to the Government of India's appeal, Madras factories commenced crushing earlier than usual but the high price of gur resulted in a good deal of cane in the factory areas being diverted to the manufacture of gur. Under the provisions of the Madras Sugar Factories Control Act of 1949, areas were "reserved" for factories though there was no need for this except perhaps in East Godavari District where there were two factories within a radius of ten miles. The other factories are 200 to 300 miles apart from each other and reservation did not help them so long as the manufacture of gur was allowed in the factory areas. The Government of Madras imposed a half-hearted ban on the production of gur in certain factory areas, but withdrew it shortly following opposition from the cane growers.

The Government fixed the same flat prices for the 1949-50 season as that for the previous season in spite of the representations of the South Indian Sugar Mills' Association urging the application of a Sliding Scale system of payment based on the selling price of sugar and the recovery.

In spite of several unfavourable factors, Madras sugar factories produced more sugar than in the previous year as the following figures show : —

TABLE No. B

—	1948–49	1949–50
	(9 Factories)	(11 Factories)
Cane crushed (Tons)	5,86,728	6,54,146
Sugar made „	55,000	62,586
Average recovery per cent	9.54	9.57

Had gur prices remained normal it was estimated that sugar production in 1949-50 in Madras State would have reached a figure of 71,180 tons.

The Pugalur factory in Trichinopoly District has a second season usually from July to October, and this year it is estimated to have crushed 40,000 tons of cane and produced 3,600 tons sugar. This is considerably lower than was originally expected, owing to very high prices for gur. The Government of Madras fixed the cane price at Rs. 48 per ton for the second season 1949-50 with an increase of Re. 1-4-0 per ton, although sugar selling prices remained unaltered.

The increased production in this State helped the Government of India to divert North Indian production to deficit areas in upper India.

Hospet produced 29.4 per cent more than the previous season and this percentage seems to be the higest in the Union.

A new factory in Madurai came into operation for the first time this season.

The Government fixed the gate-cane price per ton as follows:—

	Rs.	a.	p.
Factories whose crushing capacity is less than 300 tons per day	42	0	0
Factories whose crushing capacity is between 300 tons to 1,200 tons	46	12	0
Factories whose crushing capacity is over 1,200 tons	47	4	0

Proposal for the levy of a cess was considered, but deferred in view of the severe criticism made by the Chairman of the Tariff Board at Bombay on similar levy in other States.

Jaggery price was generally high but did not affect the factories in the South because the ryots had not sufficient time to procure the necessary equipment for the manufacture of jaggery.

The factories in Vizag, however, suffered because of the high price for jaggery and the Government made a belated attempt to increase supplies of cane to factories by banning movement of gur, but the ban was found ineffective and withdrawn.

Sugar Industry in Pakistan in 1948-49 and 1949-50

The sugar production in the 1949-50 season in Pakistan recorded a fall, although the same number of factories, viz. four, worked during the 1949-50 season as in the 1948-49 season. The total production of sugar amounted to 23,284 tons in the 1949-50 season as against 31,765 tons in the 1948-1949 season, which represented a decrease of about 27%. The total area under sugarcane, according to sugarcane forecast dated 14-9-1950 was 737,000 acres in 1949-50 as against 714,000 acres in 1948-49. The total yield of cane in terms of raw sugar (gur) was 1,019,000 tons in 1948-49, the figures for yield in 1949-50 are still not available. The total quantity of cane crushed was only 2,86,358 tons in 1949-50 as compared to 3,53,052 tons in the previous season. There was a corresponding fall in the duration of the season, duration being 98 days as against 118 days in the 1948-49 season. Sugar recovery also showed a fall during the season 1949-50 to 8.13% from 8.99% in 1948-49. The comparative figures of production in different areas in Pakistan during the last two seasons were: East Bengal 23,270 tons in 1948-49 and 15,732 tons in 1949-50, percentage decrease being 32.39 per cent. N.-W.F.P.: the production in 1948-49 was 8,487 tons and 7,552 tons in 1949-50, there being a decrease of 10% in 1949-50.

Comparative Figures of Production, Duration of the Season and Sugar Recovery for Indian Union and Pakistan (1949-50)

Below are the comparative figures of sugar production, cane crushed, duration of the season, sugar recovery, etc. in the two dominions :

TABLE No. C

—	India	Pakistan
No. of factories	139	4
Average No. of days worked	91	98
Total cane crushed (tons)	98,66,096	2,86,358
Total sugar produced (tons)	9,75,365	23,284
Total molasses (tons)	3,55,466	11,013
Recovery per cent sugar	9.88	8.13
Recovery molasses %	3.60	3.84
Area under sugarcane (acres)	3,641,000	737,000
Total Yield (raw sugar—gur)	4,904,000	N.A.

It may be recalled that the Sugar Panel appointed by the Pakistan Industrial Convention proposed starting 10 sugar mills with a total production capacity of 1,35,000 tons of sugar per annum which is the approximate requirement of the West Punjab at present. The annual imports of sugar in Pakistan cost about Rs. 9.2 crores while the cost of machinery installed for this purpose till 1947 would come to only about Rs. 4.4 crores (*vide* Agricultural Review issued by the Ministry of Agriculture, May 1948). The annual requirement of sugar for Pakistan is about 285,000 tons while the production till 1950 was about 23,000 tons.

During 1950, Pakistan obtained her requirements from Cuba and other countries at prices reported to be lower than prices at which Indian sugar was quoted. During the year 1949 it was reported that Pakistan was augmenting the capacity of the sugar factory at Mardan. Development in the plan was reported in 1950.

A Note on the Sugar Industry in other areas

During 1949-50 the production of sugar in West Bengal and Assam was 3,000 tons as compared with 4,000 tons in 1948-49 and 5,200 tons in 1947-48. The number of factories which worked during the year was only one as against two in 1947-48 and one in 1948-49. The quantity of cane crushed was 32,000 tons as against 41,000 tons in 1948-49 and 48,100 tons in 1947-48. In East Punjab only one factory worked and the production was 9,000 tons in 1949-50 as compared with 9,700 tons in 1948-49 and 12,300 tons in 1947-48.

The production of sugar in 1949-50 in the Raj Pramukh States was 56,000 tons and in the Chief Commissioner's States 5,000 tons with cane crushed being 592,000 tons and 57,000 tons respectively. The production of sugar in the Indian Native States in 1948-49 was 1,32,400 tons as compared to 1,36,500 tons in the year 1947-48.

CHAPTER 15

LABOUR IN SUGAR INDUSTRY

Employment in Sugar Industry since 1929

The Sugar Industry, the second largest industry in the country, is responsible for employing over 130,000 labour, skilled and unskilled, besides giving employment to no less than 3,500 University men. The U.P. and Bihar which produce nearly 75 per cent of the sugar of the country employ over 100,000 men during the crushing season and about a quarter of the number during the off-season. The average daily number of employees in the Indian (Undivided) sugar industry in 1929 was 14,729; in 1930 it was 14,853; in 1931, 18,030; in 1932 it increased to 33,900; in 1933 to 49,195; in 1934 to 64,186; in 1935 to 69,700; in 1936 to 77,087; in 1937, 1938 and 1939 it fell to about 76,500 and in war-time it again rose to 85,776 in 1940; was 85,718 in 1941 and it again began falling to 84,100 in 1942 and to 83,294 in 1943. The increase in average daily employment between 1929 and 1939 was 422.3 per cent, between 1939 and 1943 it was 8.3 per cent and between 1929 and 1943 it was 465 per cent. Labour turnover in the sugar industry is low, the average varying between 2 and 3 per cent as most of the skilled and unskilled workmen are drawn from villages nearby. Nearness of home and the fact that the crushing season coincides with the slack season in agriculture accounts for the low turnover. The percentage of the seasonal to total workmen varies from centre to centre from 75 per cent as in Champaran to 12 per cent in Madras and 34 per cent in Belapur.

(*For Table No. A, see pp. 133-34*)

Bonus—A Brief History—1931-32 to 1949-50

Bonus in Sugar Industry is linked to production and not to profits.

Bonus as a share of labour in profits was not acknowledged in early periods in the sugar industry. Evidence on record shows that the system of paying bonus to employees was not universally followed in sugar factories in 1932. Though the sugar industry earned lucrative profits as a result of protection granted in 1932, only a few factories granted bonus, purely as *ex-gratia* payment out of the sweet will of the employer. Award of bonus depended on the profits of the company. In 1943-44, only 11 out of 30 factories surveyed paid bonus varying from two to three months' pay and the percentage of net profits varied from 9 per cent to 19 per cent. In February 1947, the Sugar Factories Labour (Wages) Inquiry Committee, U.P. and Bihar, recommended that 25 per cent of profits of a concern after exclusion of taxes, but not excluding

TABLE No. A

Wages—A Brief Chronology since 1931-32 to 1949-50

Year	Wage Levels			Remarks
	Maximum	Minimum	Average	
	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1931-32	...	...	11 4 0	Protection benefit gave strength and prosperity to industry, but labour did not receive the advantage.
1936-37	...	4 0 0	6 0 0	
1937	12 0 0	...	...	Tariff Board recommendation for absolute minimum.
	WESTERN REGION			
1938 (Aug.)	13 15 3	9 0 3	11 4 6	The actual wage position from 1938 to 1947 just before the enforcement of the Sugar Factories Labour (Wages) Inquiry Committee recommendations in U.P. and Bihar.
	CENTRAL REGION			
	11 10 11	8 13 11	9 10 10	
	EASTERN REGION			
	12 1 4	7 7 8	8 13 8	
	WESTERN REGION			
1939 (Jan.)	17 10 4	10 6 1	12 12 2	In 1939 to 40, the minimum wage was bare Rs. 11 p.m. in U.P. and Bihar.
	CENTRAL REGION			
	13 10 4	8 3 4	10 1 1	
	EASTERN REGION			
	11 2 3	7 4.10	8 10 1	
	WESTERN REGION			
1943 (Aug.)	24 10 9	17 14 9	20 7 6	
	CENTRAL REGION			
	20 5 10	13 9 6	16 15 1	
	EASTERN REGION			
	19 1 8	13 2 9	15 9 3	

TABLE No. A—*Contd.*

Year	Wage Levels									Remarks
	Maximum			Minimum			Average			
	WESTERN REGION									
	Rs.	a.	p.	Rs.	a.	p.	Rs.	a.	p.	
1944 (Jan.)	29	11	4	21	5	8	23	8	4	In 1945–46, the minimum wage was Rs. 22-8-0 p.m. in U.P. and Bihar.
	CENTRAL REGION									
	22	7	7	14	8	2	16	13	10	
	EASTERN REGION									
	21	12	0	15	8	0	17	9	2	
	WESTERN REGION									
1946 (Aug.)	33	5	4	24	15	6	27	1	3	In 1946–47, the minimum wage was Rs. 36 p.m. in U.P. and Bihar.
	CENTRAL REGION									
	27	6	6	18	9	6	22	12	2	
	EASTERN REGION									
	26	15	6	22	2	1	24	10	6	
1947 (Jan.)	WESTERN REGION									Recommendations of the Sugar Factories Labour Wages Inquiry Committee enforced by U.P. and Bihar Governments. It recommended a minimun consolidated wage of Rs. 36 among other things.
	42	10	6	34	12	1	36	15	9	
	CENTRAL REGION									
	38	2	11	30	15	9	33	11	9	
	EASTERN REGION									
	41	11	2	36	1	9	36	9	8	
1947 (Feb. onwards)	...			36	0	0	...			In 1947–48, the minimum wage was Rs. 45 p.m. in U.P. and Bihar.
1947–48	...			45	0	0	...			On account of continuous rise in prices, Government granted further increases in wages and raised the minimum wage to Rs. 45 per month.
1948–49 (Dec.)	...			55	0	0	...			Further rise in prices brought a further increase and the minimum of Rs. 55 p.m. consolidated wage was assured to workers.

the amount set apart as reserve should be paid as bonus in proportion to the monthly wages. The Government accepted the recommendations and enforced them with immediate effect. In January 1948, the industry agreed to pay bonus at a still enhanced rate as a result of the tripartite deliberations between the representatives of employees, employers and the Government on the basis of cane crushed.

TABLE No. B

Rate of Bonus in 1946-47 in U.P. and Bihar

Amount of Cane Crushed during 1946–47 season	Rate of Bonus
(*a*) Under 10 lakh maunds ...	25 per cent of profits after payment of taxes; no bonus if no profit after deductions
(*b*) 10 to 18 lakh maunds ...	2 annas per maund of sugar produced
(*c*) Above 18 lakh maunds, but below 20 lakh maunds ...	3 annas per maund of sugar produced
(*d*) Over 20 lakh maunds ...	4 annas per maund of sugar produced

In addition to the above, Government also directed every vacuum pan sugar factory to pay an extra bonus of Re. 1 per maund on all stocks remaining over from the 1946-47 crushing season, after the decontrol of sugar in December 1947.

For the crushing season 1947-48, the Government of U.P. and Bihar issued an Order in November 1948 directing every vacuum pan factory to pay the bonus as under:—

TABLE No. C

Rate of Bonus for the 1947-48 Season in U.P.

Amount of Cane Crushed	Rate of Bonus per maund of production of sugar during 1947–48	
	As per November Order	Revised Rate
	Rs. a. p.	Rs. a. p.
Under 10 lakh maunds	0 4 0	0 3 0
10 to 18 lakh maunds	0 6 0	0 5 0
18 to 20 lakh maunds	0 8 0	0 7 0
20 to 30 lakh maunds	0 10 0	0 9 0
Over 30 lakh maunds	0 11 0	0 10 0

Owing to the reduction in the price of cane sugar and a large carry-over of stocks remaining with the industry, the Government revised the rate. The revision resulted in the reduction of the rate of bonus in most of the categories by one anna as detailed above and bonus already having been paid in part, the actual position was as follows:—

TABLE No. D

Revised Rate of Bonus for 1947-48 Season in U.P.

Amount of Cane Crushed	Per maund of the production of sugar during 1947–48		
	Rate of Bonus	Rate at which bonus has already been paid	Rate at which bonus is to be paid
	Rs. a. p.	Rs. a. p.	Rs. a. p.
Upto 10 lakh maunds ...	0 4 0	0 2 0	0 1 0
Over 10 lakh and upto 18 lakh maunds	0 6 0	0 3 0	0 2 0
Over 18 lakh and upto 20 lakh maunds	0 8 0	0 4 0	0 3 0
Over 20 lakh and upto 35 lakh maunds	0 10 0	0 5 0	0 4 0
Over 35 lakh and upto 45 lakh maunds	0 11 0	0 5 6	0 4 6
Over 45 lakh maunds ...	0 11 0	0 5 6	0 5 0

On the 11th January 1950, the U.P. Government appointed a Committee of Inquiry under Mr. Justice Bindbasni Prasad to make the necessary adjustment, if any, in the amount of bonus for 1947-48 and to determine the rate of bonus payable to workers in 1948-49.

The following are, in brief, his recommendations:—

TABLE No. E

Recommendations of Justice B. B. Prasad for Bonus in U.P. for the Season 1948-49

Quantity of Cane Crushed in Maunds	Rate of Bonus 1948–49 Per maund sugar produced
	Rs. a. p.
1. Upto 13 lakhs ...	0 2 0
2. Over 13 and upto 18 lakhs ...	0 2 6
3. Over 18 and upto 20 lakhs ...	0 3 0
4. Over 25 and upto 35 lakhs ...	0 4 0
5. Over 35 and upto 50 lakhs ...	0 5 0
6. Over 50 lakhs ...	0 6 0

According to Mr. Justice B. B. Prasad's order, the rate of bonus for factories which have shown profit comes to 20 per cent of net profit for the 1948-49 season and for Rampur factories to 25 per cent. Out of 15 factories which had reprocessed khandsari into crystal sugar, only 5 were given a benefit of reduction of one anna in the bonus for the 1947-48 season. The others were not granted the reduction of one anna as per revised rates ordered by the Government for the 1947-48 season as mentioned above.

Judgment on appeal against the award of Hon'ble Mr. Justice B. P. Sinha

We give below the substance in brief of the judgment delivered in March 1951 by the Labour Appellate Tribunal at Calcutta on appeal against the award on general dispute by the Hon'ble Mr. Justice B. P. Sinha by the Bihar Sugar Mills' Association :—

Bonus :

(1) The restoration of 1 anna reduction in the bonus of 1947-48 is upheld.

(2) Regarding 1948-49 bonus, the following scale is awarded :—

Upto 11 lakhs crush or less—No bonus

Over 11 lakhs upto 24 lakhs—5 annas per md. of sugar on the whole of the crush.

Over 24 lakhs upto 35 lakhs—8 annas per md. of sugar on the whole.

The balance is to be paid after adjusting the amount already paid in accordance with the stay order, within a month from this date. Those, if any, who have not paid the half, yet have to pay the whole within a month.

(3) Further exemption in respect of bonus for the year 1948-49 is granted to (1) Sasamusa Sugar Works, and (2) Gangadevi Sugar Mills Ltd.

(4) On labour's appeal the South Bihar Sugar Mills, Bihta, is made liable to pay bonus for the year 1948-49 on the same scale as for others. The liability is joint between the South Bihar Sugar Mills and the Jagdishpur Zamindary Company. The appeal by labour against exemption in the case of Rohtas Industries Ltd., Dalmianagar, and Mohini Sugar Mills Ltd., Bikramganj, is rejected.

Compulsory leave : The judgment of Mr. Justice B. P. Sinha abolishing the system is upheld.

Retaining allowance : The judgment of Mr. Justice B. P. Sinha is upheld. The liability to pay will arise in two instalments, first half within the 15 days on joining the season and the balance a month later.

Service conditions (On appeal by Labour): The Tribunal rejected the award of Mr. Justice B. P. Sinha wherein he says that service condi-

tion is not a matter of adjudication. In the judgment of the Appellate Tribunal the service conditions may be certified and if there still remains a dispute it can be referred to an Industrial Tribunal for adjudication.

Note: This summary is based on the judgment delivered orally from the draft and as reported by the Chief Labour Officer, Bihar Sugar Mills' Association.

Dearness Allowance and Trade Unionism

Dearness Allowance: Besides bonus, labour in sugar factories used to get till 1947 a dearness allowance. It ended with the enforcement of the recommendations of the Sugar Factories (Wages) Enquiry Committee, U.P. and Bihar *during the crushing season* 1946-47. It is an element in wages which made its first appearance in 1941-42. It was paid by all units in sugar industry, but at different rates. Some paid at a flat rate of Rs. 12 p.m. and others at annas four per rupee of the basic wage, subject to a minimum of Rs. 5 and a miximum of Rs. 75. In many units, it was paid at rates varying according to scales of pay being generally 65 per cent to 70 per cent on basic wage of Rs. 80 or Rs. 90 and then scaling down to 5 per cent to 17 per cent of the salary with a maximum of Rs. 225.

Trade Unionism in Sugar Industry: The first association to be formed in the sugar industry, namely the Indian Sugar Mills' Association, Calcutta, belonged to the employers. It was averse, in the initial stages, to giving recognition to trade unions formed with the help of outsiders, though the Association had one of its objects to promote good relations between employers and employees. The employers, in early times, used to refuse employment to active trade union workers from the next season. The workers were, therefore, afraid of joining trade unions at risk of losing their jobs. In 1939, a Trade Union was formed in a mill in Kathkuiyan, Gorakhpur, and was registered under the Indian Trade Unions Act, 1926. In war years, no progress was made. A number of trade unions were registered in the years 1943, 1944, 1945, etc. as follows:—

TABLE No. F.

No. of Trade Unions registered and their Membership

Year	No. of Trade Unions in Sugar Industry	Total Membership
1945-46	4	4,388
1946-47	28	22,172
1947-48	67	54,352
1948-49	87	...
1949-50	...	...

All the above Unions have a Federation known as the Indian National Sugar Mill Workers' Federation, Kanpur, with its branches in almost all factories.

The following Table No. G shows the number of strikes, number of workers involved and the number of man-days lost during the years 1943 to 1949.

TABLE NO. G

Number of Strikes, Workers Involved, Man-Days Lost—1943 to 1949

Year	Total Number of Strikes	Total Number of Wcrkers involved	Total Number of man-days lost
1943	1	1,300	4,550
1944	2	650	1,300
1945	3	1,501	5,116
1946	2	970	1,512
1947	18	9,817	26,937
1948	13	8,560	19,319
1949 (Upto August)	1	1,300	3,365

Minimum Wages in Sugar Industry in U.P. and Bihar (1945-46 to 1948-49)

The following is a comparative statement showing wage levels prevalent in the sugar-industry. The Table No. H below shows how wage-level in 1945-46 was gradually increased in subsequent years:

TABLE NO. H

Wage Level in U.P. in 1946-47 to 1948-49

Year	1945-46 Wage level which was increased in subsequent years						
	Rs. 22 8	Rs. 23 to Rs. 30	Rs. 31 to Rs. 40	Rs. 41 to Rs. 50	Rs. 51 to Rs. 100	Rs. 101 to Rs. 200	Rs. 201 to Rs. 300
*1946-47	Rs. 36	Rs. 36 to Rs. 43	Rs. 43 to Rs. 52	Rs. 52 to Rs. 61	Rs. 61 to Rs. 110	Rs. 110 to Rs. 200	Rs. 215 to Rs. 322 8
1947-48	Rs. 45	Rs. 45 to Rs. 52	Rs. 51 to Rs. 60	Rs. 60 to Rs. 69	Rs. 68 to Rs. 117	Rs. 117 to Rs. 234	Rs. 225 to Rs. 337 8
†1948-49	Rs. 55	Rs. 55 to Rs. 62 8	Rs. 59 14 to Rs. 68 14	Rs. 67 8 to Rs. 76 8	Rs. 125 to Rs. 248	Rs. 75 to Rs. 124	Rs. 249 to Rs. 354

* As per Bhatia Committee Recommendations implemented from the 1st of October 1946. The *incidence* was Re. 0-9-6 per maund of sugar produced and reckoning U.P's production at 5.2 lakh tons, the extra amount paid by the industry to workers was in the neighbourhood of Rs. 84,98,660.

† As per Nimbkar Labour Enquiry Committee Recommendations.

It is not generally known outside the Provinces concerned how much the Sugar Industry has done for the Labour in U.P. and Bihar.

It may be said without fear of exaggeration that no other industry, perhaps, has reacted so favourably to Labour and its reasonable demands as the Sugar Industry.

As a result of the Bhatia Committee recommendations which were implemented and came into effect from the 1st October 1946, laying down certain minimum wages and scales of increment, the incidence of labour was Re. 0-9-6 per maund of sugar produced ; and reckoning U.P.'s production at 5.2 lakh tons, extra amount paid by the Industry was in the neighbourhood of Rs. 84,98,660.

On account of compulsory leave, the incidence was Re. 0-3-0 per maund of sugar, and the total amount paid was Rs. 26,83,787, according to the data collected from Members of the Indian Sugar Syndicate Ltd.

The payment of bonus for the 1946-47 season as ordered by the Government to be paid to workmen came to Re. 0-3-5 per maund of sugar produced and amounted to Rs. 30,56,540.

The special bonus on old stocks of sugar left over after decontrol on 8th December 1947 at Re. 1-10-0 per maund, aggregated to Rs. 19,75,892.

The extra payment made to labour by the Sugar Industry in U.P. alone works out roughly to Rs. 1,62,15,000 for the whole industry or Rs. 2,50,000 approximately per factory taking into account 64 working factories in U.P. and this is by no means a small sum especially in view of the short working season of 1946-47.

In the case of Bihar factories, the increases on account of payments to labour were as detailed below (Table No. I) :—

TABLE NO. I

The Increases on account of Payments to Labour in Bihar

	Rs.
1. On account of Bhatia Committee Recommendations ...	32,70,802
2. On account of compulsory leave	7,54,801
3. On account of annual Bonus	8,59,635
4. On account of special bonus at Re. 1 per maund on stocks left over after decontrol on 8-12-47 ...	3,17,452
Rs.	52,02,690

Overtime is not generally worked in the Sugar Factories. The work is carried on in three shifts of eight hours each during the season. But if overtime is put in for any special reason, it is always paid for at double the ordinary rates.

During the season the sugar factories run continuously and it is not possible to close them down once a week. But the shift system has been so arranged that every workman gets a day off in each week at regular intervals.

* Conditions of Labour in Sugar Factories in the Uttar Pradesh during the Seasons 1948-49 and 1949-50

The Sugar Industry occupies a vital place in the economy of the State. The Uttar Pradesh is the largest sugar producing State in India. In the year 1948-49, out of a total of 134 cane-factories which worked in the Indian Union, 65 belonged to the Uttar Pradesh, the production of the latter being 5,27,000 tons of sugar out of a total production of 10 lakh tons in the country. In the year 1949-50, 66 factories worked in U.P.

1. EMPLOYMENT : From the point of view of number of persons employed the sugar industry comes next to the cotton textile industry only in the State. The average daily number of workers employed in the sugar industry was 49,526 in the year 1949, while the corresponding number in the cotton textile industry was 56,241 in that year.

Sugar industry is a seasonal industry, and therefore employment is partly seasonal and partly perennial. Seasonal labour consists largely of unskilled labour, while some technical persons are employed throughout the year. Such technical hands, as fitters, drivers, juice supervisors, mates of the manufacturing departments and the laboratory chemists, who are not employed throughout the year are allowed retainer allowance for the off-season. Retainer is, generally speaking, allowed to unskilled labour.

Recruitment : With a view to regulating the employment of seasonal workmen in all vacuum-pan sugar factories in the Uttar Pradesh, the U.P. Government made the following rules in November 1949 in this regard :—

(1) A worker who had worked, or but for illness or any other unavoidable cause, would have worked in a factory during the whole of the second half of the last preceding season, will be employed during the crushing season of 1949-50 in such factory.

(2) All the seasonal workers who worked during the last season will be put on their old jobs whether they were in the "R" shifts or in usual shifts, subject to job or shift transfer to a maximum of 5 per cent of the total number of employees in the factory, without in any way affecting the wages or the status of the workers concerned.

(3) Vacancies caused by dismissal, resignation or death shall be filled up by old hands of that particular factory if suitable hands are available.

* Note of the Sugar Commissioner dated 13th December 1950.

Source of Labour: Sugar factories are spread over in the sugar-cane areas of the State, not only in towns but also in the remotest villages. Unskilled labour force to a large extent is supplied to these factories from the surplus rural population in these areas.

Dismissal: In January 1950, the Government of the U.P. prohibited the employers of the sugar factories from discharging, dismissing or otherwise removing any worker from service, without the express permission of the Regional Conciliation Officer of the area concerned.

2. WAGES: In the crushing season 1947-48, the minimum consolidated wage was raised to Rs. 45 p.m. This minimum was further raised to Rs. 55 p.m. during the season 1948-49 and remained in force during the crushing season 1949-50. The schedule of wages fixed for the year 1948-49 is given below (Table No. J):—

TABLE No. J

Wages Levels of 1945–46	Increase in wages made
(1) Rs. 22–8–0 ...	An increase of Rs. 32– 8–0
(2) Rs. 23 to Rs. 30 ...	An increase of Rs. 32– 8–0
(3) Rs. 31 to Rs. 40 ...	An increase of Rs. 28–14–0
(4) Rs. 41 to Rs. 50 ...	An increase of Rs. 26– 8–0
(5) Rs. 51 to Rs. 100 ...	An increase of Rs. 24– 0–0
(6) Rs. 101 to Rs. 200 ...	An increase of Rs. 24% of pay.
(7) Rs. 201 to Rs. 300 ...	An increase of Rs. 18% of pay.

3. BONUS: The following rate of bonus was fixed by the State Government for the year 1947-48 (Table No. K):—

TABLE No. K

Amount of cane crushed in a factory	Rate of bonus per maund of production of Sugar during 1947–48 in As.
Under 10 lakh maunds ...	4
10 lakh to 18 lakh maunds ...	6
18 lakh to 20 lakh maunds ...	8
20 lakh to 30 lakh maunds ...	10
Over 30 lakh maunds ...	11

Half of the total amount of bonus was payable by November 30, 1948. On account of reduction in price of sugar and large carry-over remaining with the industry, the rates for payment of the remaining half of the bonus were reduced by the State Government in February 1949 by 1

anna per maund for every vaccum-pan sugar factory, except the 19 sugar factories which converted khandsari sugar into crystal sugar.

With a view to enquiring into the bonus payable by the sugar factories in the Uttar Pradesh to their workmen for the crushing season of 1948-49 and making readjustments necessary, if any, in the amount of bonus paid in respect of 1947-48, the State Government appointed a judge of the High Court to the Court of Enquiry (Sugar). The Court of Enquiry (Sugar) made the following recommendations which have subsequently been enforced by the State Government but could not so far be carried out on account of two legal implications:—

(1) *Bonus for 1947-48*: (*a*) Recommended benefit of reduction in rates also to 5 out of 19 sugar factories which converted khandsari sugar into crystal sugar and had not been allowed this benefit by the State Government in their order dated February 9, 1949.

(*b*) In regard to the factories which did not convert khandsari into crystal sugar in 1947-48, the Court recommended the following principles:—

(i) Factories whose profits in 1947-48 have been three times or more of the extra bonus which would be payable by them if the reduction in rates allowed by the notification, dated February 9, 1949, is withdrawn, should pay bonus at the unreduced rates.

(ii) The reduction in rates allowed by the notification dated February 9, 1949, should continue in the case of the factories which have suffered loss on the year's working in 1947-48 as per their balance sheet or whose profit is less than three times the bonus payable by them if the reduction in rates is withdrawn.

(iii) Factories which have suffered loss on the year's working for 1947-48, but show profit in their balance sheets by drawing upon past reserves like the Dividend Equalisation Fund or by adding profit from transactions unconnected with the production of sugar and have distributed, or decided to distribute, dividends shall pay at the reduced rates.

(2) *Bonus for 1948-49*: For 1948-49 the bonus should be paid by the factories according to the following principles:—

I. Every factory which has shown net profits in its balance sheet on the year's working shall pay bonus at the rate of 20 per cent of such net profits, except two factories at Rampur, where the rate of bonus shall be 25 per cent. Where, however, profits on the year's working have been wiped out entirely on account of past year's loss no bonus shall be payable by such factory.

II. If a factory has suffered loss on the year's working but shows profits in its balance sheet and distributes dividend it shall pay bonus at the rate of 2 days' basic wages for every one per cent of dividend declared on ordinary share capital paid up.

III. Factories crushing over 13 lakh maunds of cane shall pay bonus at the following rates (Table No. L): —

TABLE No. L

Quantity of cane crushed in maunds	Rate of bonus
Over 13 upto 18 lakhs ...	0-2-0 per maund of sugar produced
,, 18 ,, 20 ,, ...	0-2-0 per maund of sugar produced
,, 20 ,, 25 ,, ...	0-3-0 per maund of sugar produced
,, 25 ,, 35 ,, ...	0-4-0 per maund of sugar produced
,, 35 ,, 50 ,, ...	0-4-0 per maund of sugar produced Upto 35 lakhs, additional one anna for crush over 35 lakhs upto 50 lakhs of crush.

IV. Factories crushing upto 13 lakh maunds of cane shall, subject to the provisions of paragraphs I and II above, pay bonus only if they show any profits on the year's working in their balance sheet at the rate of 20 per cent of such profits.

V. Bonus shall be paid in proportion to each workman's earnings, viz. basic wages plus dearness allowance, if any, during the year 1948-49.

4. DEARNESS ALLOWANCE: No Dearness allowance is paid separately to the workman in the sugar industry in the Uttar Pradesh, since the enforcement of the recommendations of the sugar Factories (Wages) Enquiry Committee, U.P. and Bihar, during the crushing season of 1946-47.

5. LEAVE: In the year 1948, Government approved the list of standard festival holidays, numbering 17 in a year, to be observed uniformly in all sugar factories in the State, as mutually agreed upon by the U.P. and Bihar Sugar Mill Workers' Federation and the Indian Sugar Syndicate. In the year 1949, Government enforced a list of 17 holidays with wages in a calendar year to be observed by all the sugar factories in the Uttar Pradesh. Except for this uniformity in leave no uniformity in other leave is followed in sugar factories, as there is no provision to this effect under the existing law. The minimum period of leave is, however, granted as provided in Section 79 of the Factories Act, 1948. On recommendation of the aforesaid Court of Enquiry, seasonal workers will also become entitled to leave at the rate prescribed by Section 79 of the Factories Act, 1948, irrespective of the period of continuous service.

6. HOUSING AND WELFARE: Most of the sugar factories in this State are situated in rural or semi-urban areas. The workers in such factories quite often live in their village homes in the neighbourhood. In addition to this most of the mills also provide quite a large number of

residential quarters for their workers. Of course, these houses do not conform to the modern requirement for industrial housing.

The State Government has under consideration a scheme of development of sugar industry and for providing suitable welfare measures including housing of workers in the industry. Government recently advertised for suitable designs of workers' quarters. Out of the entries received a few suitable designs were selected for adoption, and prices were offered to the designers of those plans. A Housing Bill for the purpose is under way.

To make available to the workers of the sugar factories welfare facilities available to other factory workers in different towns of the Uttar Pradesh, Government started two seasonal welfare centres one in the eastern zone (village padrauna), and the other in the western zone (village khatauli) of the State. The activities of these centres consist of indoor and outdoor games, reading rooms and libraries, etc.

7. Trade Unions: During the seasons 1948-49 and 1949-50 there were two important trade union federations in the Sugar Industry, with a number of component unions affiliated to each of them. The rival federations always claimed to be the most representative of workers in the Industry. Prior to the census in the Sugar Industry held on March 15, 1950, to determine the representative character of the two federations, the Indian National Sugar Mill Workers' Federation had been recognised to be representative of workers, by the Government. This census, however, proved that the United U.P. and Bihar Chini Mill Mazdoor Federation was more representative than the other federation. The activities of the Indian National Sugar Mill Workers' Federation during these two seasons have been helpful both to the industry and the Government. The Federation was instrumental in developing collective bargaining in the Sugar Industry to a marked extent. It also extended its co-operation to Government in the settlement of industrial disputes and helped in introducing a number of ameliorative measures for the workers from time to time. The success for the Works Committees and the establishment of cordial industrial relations in the industry are, to a large extent, due to the spirit of accommodation shown by it, in most of the problems confronting the industry.

At the close of the year 1949, the Indian National Sugar Mill Workers' Federation served, through its affiliating unions, notices of strike on all sugar factories in the State the main demand of the Federation being the declaration of the bonus for the crushing season 1948-49. Other demands of the Federation related to sick leave, casual leave and other kinds of leave in a calendar year, and retaining allowances for off-season period. As a result of high level negotiations between the representatives of employers and workers and Government, a Court of Enquiry was constituted and the demands of the Federation were referred to it for enquiry. The notices of strike given to the sugar factories at the instance of the federation were withdrawn.

8. INDUSTRIAL RELATIONS : Relations between the employers and workers in the sugar industry in the U.P. have more or less been cordial. Peaceful settlement of industrial disputes and promotion of harmonious relations between employers and employees are two of the many objectives of the State Labour Office. With these objectives in view the Government in the year 1948 thoroughly reorganised the machinery for prevention and settlement of industrial disputes. The reorganised machinery so far as sugar industry is concerned consists of—

(a) Works Committees in all vacuum-pan sugar factories.

(b) Provincial and Regional Conciliation Boards for sugar.

(c) Industrial Court (Sugar).

TABLE No. M

Table giving details of the work done by the Works Committees in the Uttar Pradesh in the Sugar Industry during the Calender Year 1949

Name of the Region	No. of Works Committees	No. of meetings held	Average No. of Meetings per Works Committee	No. of cases referred to the Works Committee		
				Brought forward from 1948	New cases	Total
1	2	3	4	5	6	7
Meerut ...	13	126	9.7	3	695	698
Gorakhpur ...	28	378	13.5	31	833	864
Bareilly ...	11	183	16.6	9	519	528
Lucknow ...	10	163	16.3	7	747	754

No. of cases decided			No. of cases referred to Works Committees which were subsequently taken to Regional Conciliation Boards	No. of cases on which the decision given have been given effect to by the industrial concerns
By Unanimous vote	Otherwise	Total		
8	9	10	11	12
357	242	599	129	219
386	150	536	235	360
305	56	361	170	196
409	28	437	156	428

(b) *Provincial and Regional Conciliation Boards for Sugar*: Separate figures for the cases referred to the Regional Conciliation Boards of the sugar industry are not available. The number of cases dealt with by the State Conciliation Board (Sugar) sitting in Kapur during the years 1948 and 1949 is as under (Table No. N):—

TABLE No. N

No. of cases decided in 1948	No. of cases referred to in 1949	No. of cases decided in 1949	No. of cases pending at the end of 1949
2	6	6	Nil

(c) *Industrial Court (Sugar)*: The number of cases dealt with by the Industrial Court (Sugar) during the years 1948 and 1949 are 22 and 100 respectively.

9. LABOUR SITUATION : The following is a statement giving details of strikes in the sugar factories during the year 1949-50 (Table No. O):—

TABLE No. O

Statement showing the details of strikes in Sugar Factories in the Uttar Pradesh during the year 1949

Serial No.	Date of Strike		No. of workers involved	No. of mandays lost
	Began	Ended		
1	2	3	4	5
1. The Dhampur Sugar Mills Ltd., Bijnor	21-1-49 6 p.m.	21-1-49 8-15 p.m.	1,300	365
2. Laxmi Sugar Mills Ltd. Chhatauni, Dist. Deoria	12-9-49 (midnight)	15-9-49	154	462
3. The Lord Krishna Sugar Mills Ltd., Saharanpur	14-12-49 at 6 p.m.	17-12-49 at 2 p.m.	1,143	3,238
			2,597	4,065

N.B.—(No strike in Sugar Factories occurred upto August in Uttar Pradesh in 1950).

However, in January 1951, strike occurred in U.P. Sugar Factories and the loss to sugar production, as a result, in U.P. was reported to be 3,000 tons to 4,000 tons.

Labour Legislation in 1950

During the year under review the Government of India introduced some important Bills concerning labour legislation affecting sugar factories.

The Labour Relations Bill, 1950 : The Bill was circulated on March 10, 1950, for opinion. The Bill seeks to introduce uniformity in the basic laws governing relations between employers and employees in the country doing away with the prevailing disparity in labour laws existing in different parts of the country, especially the lack of uniformity in legisla-

tion regarding labour disputes. The definition of the word " employee " includes supervisory and managerial and watch and ward staff and needs to be amended suitably. The term " wages " defined in the Bill includes items like the value of housing accommodation, supply of light and water, medical and other amenities which are excluded in the definition of the same term under the Payment of Wages Act, and needs to be amended suitably.

Trade Unions Bill, 1950 : The Bill as introduced in the Parliament provides for the development of healthy trade unionism in the country and seeks to bring uniformity in the laws already existing in this connection. The definitions of the words " Employees " and " Labour dispute " are sought to be the same as in the Labour Relations Bill and need to be amended. The word " Strike " is not comprehensive enough to include slowing down or interruption. It was contended that it is not powerful enough to stop unfair practices by trade unions.

Fair Wages Bill, 1950 : Under the provisions of the Bill, the appropriate Government is to establish a Wage Board to fix the fair wages. In fixing the fair rate of wages, the Board shall take into account the minimum rate of wages payable to the employees, their productivity, rate of wages prevailing in similar establishments in local areas, competitive position of the establishment in the international market and the wage paying capacity of the establishment. An award of the Board is subject to appeal to the Appellate Tribunal established under the Industrial Disputes (Appellate Tribunal) Act, 1950.

CHAPTER 16

WORLD SUGAR SITUATION

Estimates from Authorities vary considerably

It has not been an easy task to get very reliable and up-to-date statistics regarding world production of sugar (beet and cane) as also regarding world consumption of sugar during the last few years and of the prospects during the next two to three years.

Reports from various authoritative sources vary considerably in their individual estimates, and this makes it difficult to form an exact idea of the acreage under cane and production and consumption of sugar. A proper idea can be had from the estimates of world production from different authorities. According to U.N. Food and Agricultural Organisation Report dated 8-5-1950, the figures of world sugar production (including U.S.S.R.) are 33,700,000 metric tons in 1948-49 and 33,800,000 metric tons in 1949-50 ; according to U.S. Department Report of August 1950, the figures are 37,287,000 short tons in 1948-49 and 37,999,000 short tons in 1949-50 ; according to F. O. Licht's estimate, dated 30-4-1950, the figures are 29,841,564 metric tons in 1948-49 and 31,655,650 metric tons in 1949-50 ; according to Willet and Gray's estimates dated 24-8-50, the figures are 32,027,592 metric tons in 1948-49 and 33,165,968 metric tons in 1949-50 ; and according to U.N. Statistical Office Estimates published in

December 1950, the figures are 30,748,000 metric tons in 1948-49 and 31,369,000 metric tons in 1949-50.

World Sugar Production on the Increase

Whatever the disparity among the various estimates, it can safely be assumed that world sugar production has been definitely on the increase and has been much higher than in the preceding years and it has shown a definite up-swing in recent years. The availability of sugar is made more difficult to overseas countries in recent times, since devaluation, partly owing to currency difficulties and partly owing to restrictions on movement. The up-swing in the production trend will be evident from the following figures in Table A. If all the sugar produced in the world is distributed equally among the people all over the world, then, it is considered that in 1949-50 each person should have got 27 lbs. and in 1950-51 about 30 lbs. per year.

Production Prospects for 1950-51

Forecasting a bigger increase in 1950-51 in the world sugar production, Messrs. Czarnikow in their *World Sugar Bulletin* of August 1950, rightly observed : " Brazil is looking forward to a larger crop in 1950-51, U.S. beet crop is expected to show an increase of about 2.5 lakh tons in 1950-51 over 1949-50 total, Philippines are expected to add some 2 lakh tons to their 1949-50 total, Cuba is expecting to produce a crop considerably in excess of the current season and weather permitting Europe may add 1.5 million tons more to 1949-50 output." However, in their revised estimates published in December 1950, Messrs. Czarnikow in their bulletin on sugar review forecast a greater increase of 2½ million tons over the 1949-50 production, the record production, according to them, being estimated at 34 million long tons, for 1950-51. In brief, their revised estimates of production are (Table A) :

TABLE No. A

World Sugar (Beet and Cane) Production—1937-38 to 1950-51

(Figures in 1,000 Long Tons)

Year	Beet Sugar	Cane Sugar	World Sugar Total	Percentage of beet and cane to total	
				Beet	Cane
				Approximately	
1937–38	11,054	18,064	29,118	37%	63%
1939–40	11,455	18,285	29,740	37%	63%
1946–47	7,721	18,041	25,762	31%	69%
1947–48	7,947	19,955	27,902	29%	71%
1948–49	10,050	20,689	30,748	35%	65%
1949–50	10,503	20,891	31,394	32%	68%
1950–51	12,325	21,700	34,025	35%	65%

Note: Long Ton = 2,240 lbs. Metric Ton = 2,205 lbs. and Short Ton = 2,000 lbs.

According to them, there is an expectation of less important changes in cane sugar production though heavy increases are expected in beet sugar in 1950-51 over 1949-50 production total, in different countries. The estimated increase in beet sugar forecast by them in Europe is of 15 lakh long tons, in U.S.A. of 3 lakh long tons, in France of 4.5 lakh long tons, in Germany 4.4. lakh tons, in Czechoslovakia of 1.5 lakh long tons, in Poland of 0.8 lakh long tons, in Denmark of 0.4 lakh long tons, in U.K. of 1.35 lakh long tons and in Italy of 1.0 lakh long tons. According to the same authority, in cane producing countries, there are to be less important changes in the 1950-51 season, only Cuba showing an increase of 1.8 lakh long tons and British Commonwealth countries showing an increase of 1.7 lakh long tons. Cuba is expected to produce a record crop of 56.5 lakh long tons in the 1950-51 season. And though the Commonwealth countries may show an increase in production, yet nothing more of an addition to the exportable surplus is expected beyond that in 1949-50. (All figures in this para are in long tons.)

Cane Sugar Production nearly two-thirds of World Sugar Production

From Table No. A above, it may be noted that cane sugar production is nearly two-thirds of the world sugar production. According to F. O. Licht, the cane sugar production was 65.7 per cent of the world sugar production in 1948-49 and 66.3 per cent in 1949-50. It increased from 65.5 per cent in 1942-43 to over 70 per cent in 1943-44, 1944-45, 1945-46, 1946-47 and 1947-48, till it came down to 65.7 per cent in 1948-49.

Among the countries that principally contributed to the increasing trend of cane sugar production in recent years is Cuba. It nearly doubled its production in 1947-48 by producing 5.96 million tons as compared with its production of only 2.8 million tons in 1939-40. In 1949-50, the Cuba production rose to 5.47 million tons and it is expected to have a still higher crop in 1950-51 of about 5.66 million tons. On the eve of the outbreak of the Korean hostilities in June 1950, Cuba had 1.7 million tons available for sale in the non-U.S. destinations and was faced with a problem to sell its surplus at its own high price of $5.45 f.a.s. Had it not been for the Korean hostilities, the surplus would never have disappeared as quickly as it did. Puerto Rico, Australia, British West Indies, Mexico, Brazil are other countries which have shown healthy trends of increase in their cane production in a remarkable degree and have far exceeded their pre-war level of production, though India, China, Indonesia and Formosa, still seem to be suffering under some handicap or the other in augmenting their production (*vide* Table No. B).

It is significant to note the strides that Australia has made in augmenting her sugar production. The Australian Sugar Producers' Association Ltd., in their review of 1949 production, stated that the production of 1949 was 944,000 tons (94 n.t.) comprising of 904,000 tons from Queensland and 40,000 tons from New South Wales. It was thus possible for Australia to export 444,000 tons. This production can be compared with 1942-47 which averaged only 611,051 tons (94 n.t.) per year, the highest

TABLE No. B

Estimate of World Cane Sugar Production and Total Cane and Beet Sugar Production

(Crop Year 1937-38 to 1950-51)

(In '000 Tons, Raw value)

Name of the country	1937-38	1939-40	1947-48	1948-49	1949-50	1950-51
WORLD BEET & CANE TOTAL. ...	29,118	29,740	27,902	30,748	31,394	34,025
WORLD CANE SUGAR TOTAL. ...	18,064	18,285	19,955	20,698	20,891	21,700
AMERICA:						
Cuba ...	3,018	2,816	5,960	5,416	5,470	5,650
San Domingo ...	419	448	415	470	439	475
Mexico ...	333	322	662	698	730	700
United States ...	408	464	336	430	460	515
Puerto Rico ...	962	910	988	1,140	1,148	1,150
British Guinea ...	196	152	164	184	195	200
British West Indies ...	401	347	440	617	645	700
Brazil ...	985	1,178	1,535	1,550	1,350	1,500
Argentina ...	410	539	597	557	540	560
Peru ...	338	466	465	465	480	450
OCEANIA:						
Hawaii ...	820	850	745	850	875	880
Australia ...	810	928	605	944	950	1,000
AFRICA:						
South Africa ...	452	532	457	544	500	565
Mauritius ...	314	250	345	390	410	440
ASIA:						
India & Pakistan						
White r. v. ...	1,180	1,550	1,345	1,265	1,210	1,350
Gur r. v. ...	2,060	1,464	2,665	2,340	2,350	2,250
CHINA ...	500	370	350	380	380	380
INDONESIA ...	1,380	1,600	...	250	225	300
PHILIPPINES ...	940	961	357	645	625	900
FORMOSA ...	1,152	1,140	287	620	610	400

Vide the U.N. Statistical Office Report as reported by the "Indian Finance" issue dated December 23, 1950.

output in the period being 669,898 tons in 1944 and the lowest being 523,794 tons in 1943. The Australian sugar industry has thus staged a remarkable recovery from its depressed position of production of 942,893 tons in 1948 to 944,000 tons in 1949.

Beet Sugar Production nearly one-third of World Sugar Output

Beet sugar production, which constitutes nearly one-third of the world sugar production (*vide* Table No. A on p. 149) was much affected in the war-time, the major producer being Europe, especially Germany and Soviet Russia, which were the vortex of World War II. World beet production went down from 11.05 million tons to 7.72 million tons in 1946-47 and it again began rising to 7.9 million tons in 1947-48 to 10.05 million tons in 1948-49, to 10.5 million tons in 1949-50 and is expected to be 12.325 million tons in 1950-51 (*vide* Table No. A on p. 149).

Europe's contribution to world sugar production is estimated by F. O. Licht to be more than five-sixths of the total beet production, the rest being of U.S.A. only. Germany, France and U.S.S.R. are major contributors to the total of European beet production to the extent of two-thirds in 1937-38, about one-half in 1949-50 and one-half in 1950-51.

Prospects for Centrifugal and Non-centrifugal Sugar in 1950-51

In an effort to get a clear picture of the production of the different kinds of sugar that regularly move into international trade and by far the most important from the standpoint of world demand, a separation of the data for Centrifugal and Non-centrifugal sugars has been made. The latter type is produced in relatively few countries and is consumed in areas where it is produced. The Centrifugal sugar is important from the standpoint of world demand. According to the report released by the Office of the Foreign Agricultural Relations of U.S. Department of Agriculture on November 27, 1950, the world production of Centrifugal cane and beet sugar in 1950-51 is expected to total 35.4 million (short tons) raw value or about 10 per cent more than the 1949-50 production of 32.1 million tons (*vide* Table No. C). The production of beet sugar, all of which is of centrifugal type, is expected to total 13.5 million short tons in 1950-51 or about 16 per cent more than the 11.6 million tons produced in 1949-50 and compares with the 5-year (1935-39) average of 11.8 million tons. If the current prospects materialise, the production of beet sugar will set a new high record exceeding the previous high output of 12.9 million tons in 1930-31 and 1939-40 seasons. The output is expected to total 21.9 million (short) tons this season compared with 20.4 million tons in 1949-50 and the 5-year (1935-39) average of 17.3 million tons. Production is expected to be increased in nearly all areas largely as a result of expanded plantings and favourable growing conditions. Mexico, Cuba and the West Indies, all expect to have slightly larger crops this 1950-51 season while India, Indonesia and Philippines are expected to have substantially large outputs.

The production of Non-centrifugal sugar is expected, according to the report, to total 5.7 million short tons in 1950-51 compared with 6.2 million tons in 1949-50 and 5-year (1935-39) average of 4.9 million tons as in Table No. C.

TABLE No. C

World Sugar Production—By Continents *

(In 1,000 short Tons, raw value)

(I) CENTRIFUGAL SUGAR

Continent	AVERAGE CROP-YEARS					
	1935-39	1940-44	1947-48	1948-49	1949-50	1950-51
North America ...	7,776	8,244	11,960	11,209	11,891	12,696
South America ...	2,026	2,260	3,101	3,165	3,131	3,289
Europe (Including Russia) ...	10,098	7,964	6,697	9,482	9,732	11,177
Asia ...	5,877	4,437	2,886	3,728	3,537	4,161
Africa ...	1,274	1,373	1,489	1,617	1,611	1,706
Oceania ...	2,086	1,786	1,669	2,161	2,151	2,357
Total:	29,137	26,064	27,811	31,362	32,055	35,386
Sugar Beet: ...	11,827	9,639	8,804	11,154	11,625	13,499
Cane Sugar: ...	17,310	16,371	19,007	20,208	20,430	21,887

(II) NON-CENTRIFUGAL SUGAR

North America ...	163	254	306	310	307	313
South America ...	709	1,108	1,309	1,299	1,272	1,275
Asia ...	4,041	3,896	4,253	4,338	4,662	4,106
Total	4,913	5,258	5,868	5,947	6,241	5,694

* Preliminary estimate.

Note: Centrifugal sugar, as distinguished from non-centrifugal, includes both cane and beet sugar produced by centrifugal process, and is the principal kind moving in international markets.

Vide Report of the Office of the Foreign Agricultural Relations of the U.S. Department of Agriculture, dated 27th November 1950, as reported by "Lamborn Sugar Market Report" dated December 5, 1950.

World Sugar Consumption on the Upgrade

Sugar consumption regulates the acreage, the size of production in the long run, the movement of sugar and last but not the least sugar prices. When sugar consumption decreases, prices generally decrease too, and production is curtailed. During recent years, the old principle has again become a reality and with the trend in the increase in consumption, production as well as prices are also found to be increasing (*vide* Table No. 5 in the "Sugar Industry At A Glance" in this *Annual*).

The world sugar consumption has been definitely on the upgrade in many countries of the world. From the limited data that is available on the subject, we are in a position to state that the world sugar consumption has increased from 27.868 million tons in 1937-38 to 27.998 million tons in the post-war period of 1947-48 and to 29.728 million tons in 1948-49 according to Willet and Grey's estimate (in metric tons). Whereas, during the same period according to the same source, the world production of sugar had been 28.08 million tons in 1937-38 and 27.552 million tons in 1947-48 and 30.867 million tons in 1948-49. No reliable figures for further period are available. The production and consumption of sugar in the world during 1946-47, however, was 25.557 million tons and 23.630 million tons.

From Table No. 5 in the "Sugar Industry At A Glance" it may be noted that the *per capita* consumption of sugar in many European countries such as Germany, Spain, Denmark, Finland, France, Hungary, Norway, U.K., etc. and other countries such as U.S.A., Australia, Brazil, has undergone heavy increases in 1949 over 1948 or over the pre-war period.

It will be evident from Table No. 42 in the "Sugar Industry At A Glance" that the trend is towards increased consumption of sugar in western countries especially. Mexico has increased her consumption from 5.58 lakh tons in 1947-48 to 5.78 lakh tons in 1948-49; Cuba from 2.08 lakh tons in 1947-48 to 2.1 lakh tons in 1948-49; Puerto Rico from 0.86 lakh tons in 1947-48 to 0.91 lakh tons in 1948-49; Hawaii from 0.30 lakh tons in 1947-48 to 0.32 lakh tons in 1948-49; South Africa from 5.55 lakh tons in 1947-48 to 5.75 lakh tons in 1948-49. Both *per capita* as well as total consumption in U.K. has gone up over the pre-war level of 105 lbs. *per capita* and, if sugar is de-rationed, Britain would require 7 lakh to 7.5 lakh tons more over the rationing requirement of 3.3 million tons per year.

Messrs. Czarnikow Ltd. in their *World Sugar Bulletin* of 31st December 1949 reviewing the world sugar situation thus very rightly observed that a considerable expansion in consumption has taken place in 1949 in many countries of the world and only in Europe and in the Far East is consumption below that of pre-war years. Currency difficulties restricted in 1949 the normal flow of sugar and but for Marshall Aid, overseas sugar would have been beyond the reach of many countries who had been receiving it.

There have been heavy increases in the consumption in the countries behind the Iron Curtain in recent years. Dr. Huge Ahlfeld writing in the issue of F. O. Licht of January 1950, observed that sugar consumption in countries behind the Iron Curtain was 4.374 million tons in 1948-49 as against 3.492 million tons in 1947-48 and 4.876 million tons in 1938-39.

World Sugar Consumption in next 5 years expected to rise

According to F. O. Licht, the world sugar consumption of sugar is expected to witness a rise in the next five years owing to the increase in the population and standard of living, at least by 4.35 million metric tons as follows:

TABLE NO. D

F. O. Licht Estimate of Increase in World Sugar Consumption in next Five Years

Country	Consumption Increase (in Metric Tons)
Europe	1,500,000
North & Central America ...	1,000,000
South America	600,000
Africa	450,000
Asia	600,000
Oceania	200,000
Total in 5-years ...	4,350,000

World Sugar Marketing Trends and Commonwealth and International Agreements

World Sugar Marketing Trends: Important changes in the world sugar market have taken place since the pre-World War II. Chief among them are:

(1) While total sugar supplies available for the world market still appear to be somewhat below the pre-war average, significant shifts in production have occurred in individual areas. Cuba has been able to increase her production greatly and her exportable surplus for the world market on the eve of the Korean hostilities was over 1.7 million tons.

(2) Significant increases have occurred in *per capita* and total consumption in many countries of the West especially, and if sugar is de-rationed, sugar consumption is likely to be up by one-fourth as in the U.K.

(3) Some countries like Mexico and Denmark which did not export sugar have expanded their production so that they are offering sugar on the world market. Many countries in the West are reducing their dependence on foreign sugar by stimulating production in their own territories. While countries like Japan and China have reduced their takings from the world market and have undergone drastic cuts in their *per capita* consumption much below the pre-war level (*vide* Table No. 5 in the "Sugar Industry At A Glance").

(4) Some countries have greatly increased their consumption. This is true of some of the importing countries. As the consumption in importing countries such as the U.K. and the U.S.A. appears to be increasing, the market for world sugar is being correspondingly expanded.

(5) Britain is on the contrary planning to increase her imports of sugar from colonies by 100 per cent by 1953 under the Commonwealth Agreement and to reduce her imports from other non-colonial foreign countries to one-third of the pre-war level.

International Sugar Agreement: As the position of production and consumption has undergone a drastic change since May 6, 1937 (when the International Agreement among several countries was signed with a view to fix export quotas limiting sales in a free market), a new International Sugar Agreement is being negotiated. The new agreement is necessitated as countries like Java, China, etc. could not fulfil their export quotas, while still others, like Australia, Cuba, West Indies, Brazil, Mexico, etc. have considerably increased their production to increase their export quota. The special meeting of the International Sugar Council which was scheduled to be held in the early part of December 1950 was further postponed to February 1951 under pressure from the U.S.A. owing to market uncertainties and the tension associated with Korean hostilities, much to the disappointment of Australia, if not Cuba.

Commonwealth Sugar Agreement, 1950: With the expansion and recovery expected in the Far Eastern and the other group of western producers, it is necessary to ensure a substantial increase in consumption of sugar, if the accumulation of an embarrassing sugar surplus is to be avoided. Such a type of fear is stated to be the possible object behind Commonwealth sugar producing countries which have entered into an agreement with the U.K. under the Commonwealth Sugar Agreement, 1950. The West Indies declined to accept the offer of the U.K. The 1950 Agreement for Commonwealth countries, is for 8-year duration, to last till 1957. The export quota for Dominions is fixed at 8 lakh tons, quota with guaranteed price by the U.K. at 450,000 tons and balance for world market at 350,000 tons. While for Colonies, the export quota is of 1,550,000 tons, guaranteed quota of 1,100,000 tons and balance for world market of 450,000 tons. The total export quota for the Commonwealth countries, under the Agreement, is 2,350,000 tons, guaranteed quota of 1,550,000 tons and for world market 800,000 tons.

APPENDIX TO THE ANNUAL FOR 1950

LIST OF SUGAR MILLS IN THE UNION OF INDIA AND PAKISTAN

WORKING AS WELL AS PROJECTED

1950

THOROUGHLY REVISED AND BROUGHT UP-TO-DATE

Publishers:—**GANDHI & CO.** *(Publishers)*,

Jan Mansion, Sir Pherozeshah Mehta Road,

FORT, BOMBAY 1.

Telegram: "KEEN", BOMBAY.

November 1950.

Telephone: *Office: 25961; 24047* *Res.: 43926*

LIST OF SUGAR MILLS (VACUUM PAN) IN THE UNION OF INDIA AND IN PAKISTAN 1950

WORKING AS WELL AS PROJECTED

(Union of India)

NOTES :—***Asterisk in the last but one column denotes mills which have also got Gur-refining plants.***

† ***Mills marked thus did not work during the 1949–50 season.***

‡ „ „ „ *are reported to be under construction.*

"S" = Sulphitation. "DS" = Double Sulphitation. "C" = Carbonatation. "DC" = Double Carbonatation.

Three Mills viz., No. 23 in Bihar, and 29 and 36 in the U.P. were allowed to be shifted to other areas in 1947.

Name of Mill, with full name and address of Managing Agents or Proprietors	*Location*	*District*	*Nearest Railway Station*	*Nearest Steamer Station*	*Daily cane-crushing capacity (tons)*	
WEST BENGAL						
1. †Shree Radha Krishna Sugar Mills, Ltd., Lessees: Bengal Pioneer Agricul. Farm Ltd., 138, Harrison Road, Calcatta. Tele { Grams: Sugarsweet, Cal. Phone: B. B. 2203.	Beldanga. (Tel. Sugarsweet, Beldanga).	Murshidabad.	Beldanga, E. I. Rly.	Lalgola.	750	DS
2. The Ramnugger Cane & Sugar Co., Ltd., M/A. M/S. Anderson, Wright & Co., 7, Wellesley Place, Calcutta. Tele { Grams: Amasis, Calcutta. Phone: West. 415 (Temporary).	Plassey P. O.	Nadia.	Plassey, E. I. Rly.	Do.	500/700	DS
3. †Rajluxmi Sugar Mills, M/A. Kartick Bose & Sons, Dr. Bose's Laboratory, Ltd., 45, Amherst Street, Calcutta. Tele { Grams: Lactic, Calcutta. Phone: B. B. 415.	Maitra Bagan, Basirhat.	24 Parganas.	Maitra Bagan Rly. Siding, B. B. L. R.	...	75	S

4. ‡All India Sugar Mills Ltd., M/A. M/S. Chakraborty Roy & Co., Ltd., 1, British India Street, Calcutta. Tele { Grams : Chini, Calcutta. Phone : Cal. 4498.	Habra.	Do.	Habra, E. I. Rly.	...	600	
					West Bengal 4	

BIHAR

1. Sakri Sugar Factory of The Durbhanga Sugar Co., Ltd., Registered Office: Lohat P. O., Dist. Durbhanga. Tele { Grams: Sugar, Lohat. Phone: Durbhanga 53A.	Sakri P. O. Tel. Sakri, Factory, Sakri. Telephone : Durbhanga 53.	Durbhanga.	Sakri, O.T. Rly.	Semaria Ghat.	700	S
2. Lohat Sugar Factory of The Durbhanga Sugar Co., Ltd., Registered Office: Lohat P. O., Dist. Darbhanga. Tele { Grams: Sugar, Lohat. Phone: Darbhanga 53A.	Lohat P. O. Tel. Lohat Factory, Lohat. Telephone : Darbhanga 53A.	Durbhanga.	Pandaul, Do. (Goods: Lohat Siding).	Do.	1300	S
3. Ryam Sugar Co., Ltd., M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur, U.P. Tele { Grams: Begg, Kanpur. Phone: Kanpur 2108.	Ryam Factory P. O. (Tel. Ryam Factory, Tarsarai.)	Do.	Tarsarai, Do.	Do.	779	C
4. Samastipur Central Sugar Co., Ltd., M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur, U.P. Tele { Grams: Begg, Kanpur. Phone: Kanpur 2108.	Samastipur. (Tel. Central, Samastipur.)	Do.	Samastipur, Do.	Do.	795	S
5. New India Sugar Mills Ltd., M/A. Cotton Agents, Ltd., 8, Royal Exchange Place, Calcutta. Tele { Grams: Cotagent, Calcutta. Phone: Bank 3411	Hassanpur Rd., P. O. Hassanpur Sugar Mill, (Tel. "Birla" Hassanpur Sugar Mills.)	Do.	Hassanpur Road, Do.	Do.	1100/1300	DS

No.	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station		Nearest Steamer Station	Daily cane-crushing capacity (tons)	
6.	Motipur Sugar Factory Ltd., M/D. Seth Haji Abdul Rahim Oosman, 2, Rajmohan Street, Calcutta. Tele { Grams : Muslim, Calcutta. Phone : B. B. 2460.	Motipur. (Tel. Sattar, Motipur and Talabgar, Muzaffarpur. Phone : Muzaffarpur 65).	Muzaffarpur.	Motipur,	O.T. Rly.	Paleza Ghat.	1300	DC
7.	Belsund Sugar Co., Ltd., M/A. Bangur Bros. Ltd., 14, Netaji Subhas Road, Calcutta. Tele { Grams : Guny export Phone : Bank 5917.	Righa P. O. (Tel. Mitha, Righa).	Do.	Riga,	Do.	Semaria.	850	DS
8.	Champarun Sugar Co., Ltd., Barrah Factory, M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur, U.P. Tele { Grams ; Begg, Kanpur. Phone : Kanpur 2108.	Bara-Chakia P. O. (Tel. Cane, Bara-Chakia).	Champaran.	Chakia,	Do.	Paleza Ghat.	932	DC
9.	Shree Hanuman Sugar Mills Ltd., M/A. Shree Hanuman Investment Co., Ltd., 178, Harrison Road, Calcutta. Tele { Grams : Hopwoda, Calcutta. Phone : B. B. 4501 (3 lines).	Motihari (Tel. Sugar, Motihari, Telephone No. 60.)	Do.	Motihari,	Do.	Do.	850	DC
10.	The Sugauli Sugar Works, Ltd., M/D. Mr. Md. Hanif & Mr. Amjadali, 3 & 5, Rajmohan Street, Calcutta.	Sugauli, (Tel. Taj Sugauli).	Do.	Sagauli,	Do.	Do.	900	DS
11.	Motilal Padampat Sugar Mill Co., Ltd., H. O. Kamla Tower, Kanpur, U.P. Tele { Grams : Motipat, Kanpur. Phone : 2532—Accounts 2315—Stores.	Majhaulia. (Tel. Motipat, Majhaulia.)	I	Majhaulia,	Do.	Do.	1000	DS

12.	Champarun Sugar Co., Ltd., Chanpatia Factory, M/A. Begg Sutherland & Co. Ltd., Post Box No. 21, Kanpur, U.P. Tele { Grams: Begg, Kanpur. Phone: Kanpur 2108.	Chanpatia, (Tel. Chansuco Chanpatia.)	Do.	Chanpatia.	Do.	Do.	870	S
13.	S. K. G. Sugar Ltd., M/A. Dalmia Jain & Co., Ltd., Dalmianagar, Sahabad. Tele { Grams: Dalmiajain, Dalmianagar. Phone: Dalmianagar 8.	Lauriya P. O. (Tele. Dalmiajain, Lauriya.)	Do.	Do.	Do.	Do.	800	DS
14.	The New Swadeshi Sugar Mills Ltd., M/A. Cotton Agents Ltd., (1) 8, Royal Exchange Place, Calcutta. Tele { Grams: Cotagent, Calcutta. Phone: Bank 3411. (2) Imperial Bank Bldg., Bank St., Bombay. Tele { Grams: Lucky, Bombay. Phone: Bombay 27046.	Narkatiaganj (Tel. Birla, Narkatiaganj.)	Do.	Narkatiaganj,	Do.	Do.	900	DS
15.	Harinagar Sugar Mills Ltd., M/A. Narayanlal Bansilal, 207, Kalbadevi Road, Bombay 2, Tele { Grams: Cryssugar, Bombay. Phone: Bombay 30841.	P. O. Harinagar. (Tel. Maryada, Ramnagar, Champaran.)	Do.	Harinagar,	Do.	Do.	1400/1500	DS
16.	Ganga Devi Sugar Mills, Ltd., M/A. Marwari Brothers, Naraipore Bagaha P. O. (Tele. Ganga, Bagaha).	Naraipur P. O.	Do.	Bagaha,	Do.	Do.	650	DS
17.	Gaya Sugar Mill, Ltd., Managing Director, Lala Guru Sharan Lal, C.I.E., P.O. Guraru Mills Dist. Gaya.	Guraru, P. O. Guraru Mills. (Tel. Sugar Mills, Gaya. Tel. Gaya 78.)	Gaya.	Guraru,	E.I.R.	Patna.	850	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
18.	The South Bihar Sugar Mills, Ltd., M/A. N. K. Jain & Co., Ltd., 3, Clive Row, Calcutta. Telegrams: Kalganime, Calcutta.	Bihta (Telegrams: Sugar, Bihta Phone: Dinapore, 30.)	Patna.	Bihta, E.I.R.	Digha.	1200	DS
19.	Mohini Sugar Mills Ltd., M/A. Messrs. Karamchand Thapar & Brothers Ltd., 5, Royal Exchange Place, Calcutta. Tele { Grams: Spiritual, Calcutta. Phone: Bank 1134/5	Bikramganj P. O. Bikramganj (Tel. Spiritual Bikramganj.)	Shahabad.	Bikramganj, A.S.L Ry.	Sinha 40 Miles Buxar 40 ,,	700	DS
20.	Rohtas Industries, Ltd., M/A. M/S. Dalmia Jain & Co., Ltd., P. O. Dalmianagar (Shahabad). Tele { Grams: Dalmiajain, Dalmianagar. Phone: Dalmianagar 8.	P. O. Dalmianagar.	Do.	Dehri-on-Sone, E.I.R.	Buxar.	1800	DC/DS
21.	*Ganga Deshi Sugar Factory, Ltd., M/D. Mr. Behari Lal, Buxar, (Tel. Sugar,—Buxar).	Buxar. P. O. Buxar Gajadharganj.	Do.	Buxar, Do.	Do.	100*	S
22.	Sitalpore Sugar Works, Ltd., M/D. M/S. H. K. Ghosh & R. N. Dutt. (1) 93A, Dharmtolla Street, Calcutta. Telephone: Bank 2622. (2) Indian Press Buildings, Allahabad. (Local Office: Sahibaganj, Chapra).	Sitalpore, (Tel. Kamla, Sitalpore, O.T.)	Saran.	Sitalpore, O.T. Rly.	Baghi.	800	DS
23.	Cawnpore Sugar Works, Ltd., Marhowrah Factory, M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur U.P. Tele { Grams: Begg, Kanpur. Phone: Kanpur 2108	Marhowrah. (Tel. Marsuco, Marhowrah).	Do.	Marhowrah, Do.	Revelganj.	939	DC

24.	The Behar Sugar Works, of the Industrial Corporation, Ltd. M/A. Bakubhai Ambalal & Co., P. B. 28, Ahmedabad. Tele { Grams: Indus, Ahmedabad. Phone: Ahmedabad 5001. H. O. Bastion Road, Fort, Bombay. Tele { Grams: Indus, Bombay. Phone: Bombay 22497.	Pachrukhi (Tel. Indus, Pachrukhi).	Do.	Pachrukhi, Do.	Palezaghat.	1100	DC
25.	New Savan Sugar & Gur Refining Co. Ltd. Lessees: The Standard Refinery & Distillery Ltd., Secretaries: M/S. Karam Chand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta. Tele { Grams: Spiritual, Calcutta. Phone: Bank 1134/5.	Siwan. (Tel. Sugar Siwan).	Do.	Savan, Do.	Siwan Ghat, O.A.	900	DS
26.	Indian Sugar Works, Lessee: Shaikh Khoda Bakhsh, P.O. Siwan, Dist. Saran. (Tel. Deen, Siwan.)	Siwan.	Do.	Do. Do.	Savan, O. A.	700	DS
27.	Bharat Sugar Mills Ltd., M/A. Cotton Agents Ltd., 8, Royal Exchange Place, Calcutta. Tele { Grams: Cotagent, Calcutta. Phone: Bank 3411	Sidhwalia. (Tel. Birla, Sidhwalia).	Do.	Sidhwalia, Do.	Revelganj & Palezaghat.	650	DS
28.	Sasa Musa Sugar Works, Ltd., M/A. Mousell & Co., Ltd., P.B. 2164, Calcutta. Tele { Grams: Diogenes, Calcutta. Phone: Bank 5666.	Sasa Musa. (Tel. Factory—Sasa Musa.)	Do.	Sasa Musa, Do.	Palezaghat.	800	DS
29.	The Vishnu Sugar Mills, Ltd., M/A. Bilasrai Banarsilal & Co., Agakhan Building, Dalal Street, Fort, Bombay. Tel. Brijbilas, Bombay.)	Gopalganj. (Tel. Visnu-Gopalganj).	Do.	Harkhua, Do.	Revelganj.	800	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station		Nearest Steamer Station	Daily cane-crushing capacity (tons)	
30.	S. K. G. Sugar Ltd., M/A. Dalmia Jain & Co., Ltd., P. O. Dalmianagar, Dist. Shahabad. Tele { Grams : Dalmiajain, Dalmianagar, Phone : Dalmianagar 8.	Hathua. P. O. Mirganj. (Tel. Dalmiajain, Mirganj. Phone— Hathwa 4 & 5).	Saran	Hathua,	O. T. Rly.	Palezaghat.	1400/1500	DS
							Bihar 30	

UNITED PROVINCES

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station		Nearest Steamer Station	Daily cane-crushing capacity (tons)	
1.	Purtabpore Co., Ltd., M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur, U.P. Tele { Grams : Begg, Kanpur. Phone : Kanpur 2108.	Mairwa. (Tel. Sucrose— Mairwa).	Deoria.	Mairwa,	Do.	Revelganj.	784	DC
2.	†Noori Sugar Works, Prop. Noori Mian & Co., Bhatni. (Tel. Noori, Bhatni.)	Bhatni.	Do.	Bhatni,	Do.	Barhaj.	726	DS
3.	Shree Sitaram Sugar Co., Ltd., M/A. Karamchand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta. Tele { Grams : Spiritual, Calcutta. Phone : Bank—1134/5.	Baitalpur, P. O. Baitalpur (Tel. Spiritual, Baitalpur, Deoria).	Do.	Baitalpur,	Do.	Do.	900	DS
4.	Cawnpore Sugar Works, Ltd., Gauri Factory, M/A. Begg, Sutherland & Co., Ltd., P. O. Box No. 21, Kanpur, U.P. Tele { Grams : Begg, Kanpur. Phone : Kanpur 2108.	Gauribazar, P. O. (Tel. Gaursuco, Gauribazar.)	Do.	Gauribazar,	Do.	Do.	738	DS
5.	Deoria Sugar Mills, Ltd., M/A. Karamchand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta. Tele { Grams : Spiritual Calcutta. Phone : Bank 1134/5.	Deoria. (Tel. Spiritual, Deoria). Tel. Deoria 19.	Do.	Deoria Sadar,	Do.	Do.	900	DS

6.†	Deoria Baitalpur Sindhi Mills, Ltd., Props: M/S. Shree Sitaram Sugar Co., Ltd., & M/S. New Savan Sugar & Gur Refining Co., Ltd. M/A. M/S. Karamchand Thapar & Bros, Ltd., 5. Royal Exchange Place, Calcutta. Tele { Grams: Spiritual, Calcutta. Phone: Bank—1134/5.	Deoria. (Tel. Spiritual, Deoria.)	Do.	Do.	Do.	Do.	351	DS
7.	Saraya Sugar Factory, Senior Managing Partner, Sardar Sir Surendra Singh Majithia, Kt., Sardarnagar. Tele { Grams; Majithias, Sardarnagar. Phone: Gorakhpur 88.	Sardarnagar.	Gorakhpur.	Sardarnagar,	Do.	Do.	2129	DS
8.	Diamond Sugar Mills, Ltd., M/A. Murarka & Sons, Ltd., 4-E, Dalhousie Square, Stephen House Calcutta Tele { Grams: Canesugar, Calcutta. Phone: West 712 office Park 438 Resi.	Pipraich. (Tel. Diamond, Gorakhpur, Phone 25 Ex.	Do.	Pipraich,	Do.	Do.	700/800	DS
9.	Pipraich Sugar Mills, Ltd., M/A. Mr. Mohammad Ashfag, B.A., General Manager.	Pipraich. (Tel. Pipraich Mill, Pipraich. Telephone: Gorakhpur 25.)	Do.	Do.	Do.	Do.	650	S
10.	The Shankar Sugar Mills, Ltd., M/A. Inderchand Hariram., 2, Doyehatta Street, Calcutta Tele { Grams: Chini Mill. Phone: B. B. 5783.	Captainganj. (Tel. Sugar, Captainganj.)	Deoria.	Captainganj,	Do.	Do.	896	DS
11.	The Punjab Sugar Mills, Co., Ltd., Managers, Messrs. Narang Bros. & Co., Ltd., 3, Cavalry Lines, Delhi.	Ghughi. Tel. Factory, Ghughi, R. S.	Gorakhpur.	Ghughi,	Do.	Do.	900	DS
12.	Mahabir Sugar Mills, Ltd., M/A. Dwarkadas Baijnath, Siswa Bazar.	Siswa Bazar. (Tel. Mahabirji, Siswa Bazar.)	Do.	Siswa Bazar,	Do.	Do.	620	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
13.	The Vishnu Pratap Sugar Works, Ltd., M/D. Raja Anirudh Pratap Narain Singh, Padrauna Raj. (Tel. Sugar, Rajabazar, Khadda.)	Khadda.	Deoria.	Khada O.T. Rly.	Barhaj	761	DS
14.	The Lakshmi Devi Sugar Mills, Ltd., M/A. Messrs. Agarwal & Co., P. O. Chhitauni. Telephone: Padrauna 3.	Chhitauni.	Do.	Chhitauni, Do.	Do.	700/750	DS
15.	Ishwari Khetan Sugar Mills, Ltd., M/A. Devidutt Surajmull, Padrauna, Deoria. Tele { Grams: Khetan, Padrauna. Phone: Padrauna 3.	Lakshmiganj. (Tel. Khetan, Lakshmiganj. Telephone: Padrauna 20.)	Do.	Lakshmigunj, Do.	Do.	732*	DS
16.	The Ramkola Sugar Mill Co., Ltd. Chairman—Lala Balmokand Shah Sawney.	Ramkola. (Tel. Sugar, Ramkola. Phone Padrauna 18.)	Do.	Ramkola, Do.	Revelganj.	900	DS
17.	Maheshwari Khetan Sugar Ltd., M/A. Messrs. Devidutt Chaturbhuj, P. O. Ramkola, (Tele. Khetan, Ramkola.)	Ramkola. (Telephone: Padrauna 4.)	Do.	Do. Do.	Barhaj.	779*	DS
18.	The Padrauna Rajkrishna Sugar Works, Ltd., M/D. R.B. Kr. Rudra Pratap Narain Singh, Jagdis Garh Estate, Padrauna, Tele { Grams: Krishna, Padrauna. Phone: Padrauna 7.	Padrauna. (Telephone No. 6.)	Do.	Padrauna, Do.	Do.	1000	S
19.	Jagadish Sugar Mills, Ltd., Raibahadur Kr. Rudra Pratap Narain Singh Saheb, Authorised Controller. Tele { Grams: Jagadish, Padrauna. Phone: Padrauna 15.	Kathkuiyan, Padrauna P. O.	Do.	Kathkuiyan, Do.	Do.	650	DS

20.	The United Provinces Sugar Co., Ltd., M/A. James Finlay & Co., Ltd., 2, Netaji Subhas Road, Calcutta. Tele { Grams: Mercator, Calcutta. Phone: Bank 4601.	Seorahi P. O., (Tel. Chini, Seorahi.)	Do.	Tamkohi Rd., Do.	Do.	925	DS
21.	Ganesh Sugar Mills Ltd., M/A. Poddar Jaipuria & Co. 33, Netaji Subhas Road, Calcutta. Tele { Grams: Jaipuria, Calcutta. Phone: Bank 2466—67	P. O. Anandnagar. (Tel. Ganesh— Anandnagar O. T.)	Gorakhpur	Anandnagar Do.	Do.	723	DS
22.	†Shree Sardar Sugar Mills Co., Proprietors: Champalal Dhanpat Singh, Head Office: 11, Armenian Street, Calcutta. Phone: B. B. 2604.	Ramchandri, P. O. Nichloul.	Do.	Siswa Bazar, Do.	Do.	80	DS
23.	The Madho Kanhaya Mahesh Gouri Sugar Mills, Ltd.	Munderwa. (Tel. Jagdish Purani Basti).	Basti.	Munderwa, Do.	Do.	700/800	DS
24.	Basti Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., Registered Office: Kapur Building, Hathi Gate, Amritsar. Admin. Office: 3, Cavalry Lines, Delhi.	Basti. (Tel. Factory, Basti.)	Do.	Basti, Do.	Ajodhyaghat.	900/1000	DC
25.	Walterganj Factory of The Basti Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., Kapur Building, Hathi Gate, Amritsar. Delhi Office: 3, Cavalry Lines, Delhi.	Walterganj. (Tel. Sugar, Walterganj.)	Do.	Walterganj, Do.	Do.	650/700	DS
26.	Mawana Sugar Works, Proprietors: The Delhi Cloth and General Mills Co., Ltd., Delhi. Tele { Grams: Yarn, Delhi. Phone: Delhi 5914—16.	Mawana. (Meerut) Tel.: Sugar, Mawana	Meerut.	Meerut	Barhaj	800/1000	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
27.	Shree Anand Sugar Mills Ltd., M/A. Agarwal Sugar Agents Ltd. Jaipuria Concern, 33, Netaji Subhas Road, Calcutta. Tele { Grams: Jaipuria, Calcutta. Phone: Bank 2466—67.	Khalilabad. (Tel. Shreeanand Khalilabad.)	Basti.	Khalilabad, O. T. Rly.	Barhaj.	550	DS
28.	The Seksaria Sugar Mills, Ltd., M/A. Govindram Bros., Ltd., Seksaria Chambers, 139, Medows Street, Fort, Bombay. Tele { Grams: Fairtrade, Bombay. Phone: Bombay 34627.	Babhnan. (Tel. Seksariaco, Babhnan.)	Gonda.	Babhnan, Do.	Do.	800	DS
29.	Nawabganj Sugar Mills Co., Ltd., M/A. Narang Bros. & Co., Ltd., Kapur Building, Hathi Gate, Amritsar. Operating Office: 3A Cavalry Lines, Delhi, Telegrams: Narangbro, Delhi.	Nawabganj. (Tel. Sugar mills, Nawabganj, Gonda.)	Do.	Nawabganj, Do.	Ajodhya Ghat.	1850	DS
30.	Balrampur Sugar Co., Ltd., Balrampur Factory, M/A. Begg, Sutherland & Co., Ltd., P.O. Box No. 21, Kanpur, U.P. Tele { Grams: Begg, Kanpur. Phone: Kanpur 2108.	Balrampur. (Tel. Balsuco, Balrampur. Telephone: Balrampur 37.)	Do.	Balrampur, Do.	Do.	768	DS
31.	Balrampur Sugar Co., Ltd., Tulsipur Factory, M/A. Begg, Sutherland & Co., Ltd., P.O. Box No. 21, Kanpur. Tele { Grams: Begg, Kanpur, Phone: Kanpur 2108.	Tulsipur. (Tel. Talsuco, Tulsipur.)	Do.	Tulsipur, Do.	Do.	746	DS

32.	R.B. Lachmandas Mohanlal & Sons Ltd., Sugar Mills, Managing Agents:— M. B. Dwarkadas Kanhaiyalal & Co. 11, A. P. Sen Road, Lucknow, Tele { Grams: Laxmansons, Lucknow, Phone: Lucknow 904.	P. O. Jarwal Road. (Tel. Laxmansons, Jarwal Road. O.T. Telephone, 16, Gonda.)	Bahraich.	Jarwal Road, Do.	Do.	860	DS
33.	The Burhwal Sugar Mills, Co. Ltd., Managing Directors: 1. Pt. Durga Shankar Dixit, 2. Lala Daya Ram, Collectorganj, Kanpur. Tele { Grams: Busumills, Kanpur, Phone: Kanpur 2758.	Burhwal, (Tel. Busumills Burhwal.)	Barabanki.	Burhwal, Do.	Do.	650*	DS
34.	Seth Ramchand & Sons Sugar Mills, Barabanki.	Barabanki. (Tel. Malaco, Barabanki. Phone: Lucknow 859).	Do.	Barabanki, O. T. Rly. & E.I.Rly.	Do.	793*	DS
35.	Ratna Sugar Mills Co., Ltd., M/A. Ratna Agents Syndicate, 107, Streat Field Road, Banaras City. Tele { Grams: Ratna Banaras, Phone: 653, Banaras	Shahganj. (Tel. Ratna, Shahganj. Jaunpur).	Jaunpur.	Shahganj, E.I.R. & O.T. Rly.	Balia.	800	DS
36.	†Shree Krishna Deshi Sugar Works, Lessees: Jai Narain Pershad & Co., Jhusi (Allahabad).	Jhusi. (Tel: Sugar-mills, Jhusi. Phone Allahabad.)	Allahabad.	Jhusi, O.T. Rly.	Do.	600*	DS
37.	†Tribeni Deshi Sugar Works, Lessee: L. Jainarain Prasad Agarwal, Naini, Tele { Grams: Madho, Naini. Phone: 394—Allahabad.	Naini.	Do.	Naini, E.I.R. & G.I.P.R.	Buxar.	300	S

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
38.	The Lakshmi Sugar & Oil Mills Ltd., Head Office: Hardoi, Managing Agents: Rai Bahadur Bansidhar Son & Co.	Hardoi. (Tel. Laksmi, Hardoi.)	Hardoi.	Hardoi, E.I.R.	Buxar	1565	DS
39.	*The Seksaria Biswan Sugar Factory, Ltd., M/A. The Seksaria Industries Ltd., Seksaria Chambers, 139, Medows Street, Fort, Bombay.	Biswan, (Tel. Factory Biswan.)	Sitapur.	Biswan, O.T.Rly.	Ajodhya Ghat.	1200 Double-Tandem	S
40.	The Oudh Sugar Mills Ltd., M/A. Cotton Agents Ltd., (1) Imperial Bank Building, Bank Street, Bombay. Tele { Grams: Lucky, Bombay. Phone: Bombay 27046 4 lines & 33745. (2) 8, Royal Exchange Place, Calcutta. Tele { Grams: Cotagent, Calcutta. Phone: Bank 3411.	Hargaon, (Tel. Osmills Hargaon Sugar Mills, Telephone Sitapur 2.)	Do.	Hargaon, Do.	Do.	1925	DS
41.	The Lakshmiji Sugar Mills Co., Ltd., M/D. Seth Kishorilal Saheb, Maholi, (Dt. Sitapur).	Maholi (Tel. Lakshmi—Maholi Telephone Sitapur 5.)	Do.	Maholi, E.I.R.	Buxar.	1250	DS
42.	Aira Sugar Factory, Prop: Indra Singh & Sons, Ltd., Tatanagar. Tele { Grams: Indrasingsons, Tatanagar. Phone: Tatanagar 18.	Khamaria, P. O. Aira Estate (Tel. "Aira", Lakhimpore Kheri, Phone: No. 24 Lakhimpur Kheri.)	Kheri.	Lakhimpore Kheri, O.T.R.	Bahramghat.	800	DS

43.	The Hindustan Sugar Mills, Ltd., M/A. Bachhraj and Co., Ltd., Jehangir Wadia Building, 51, Mahatma Gandhi Road, Fort, Bombay. Tele { Grams: Shree, Bombay. Phone: Bombay 30027. Calcutta Office:— C/o. The East India Development Co., Ltd., Bombay Mutual Building (2nd floor), Royal Exchange Extension. Phone: Bank—1178.	Golagokaran Nath Kheri (Tel. Shree–Golagokaran Nath, Kheri, Telephone No. 1, Golagokaran Nath).	Do.	Golagokaran-nath, Do.	Do.	1950	DS
44.	Rosa Sugar Works & Distillery of Carew & Co., Ltd., M/A. Gladstone Lyall & Co., Ltd., 4, Fairlie Place, Calcutta. Tele { Grams: Ghat, Calcutta. Phone: Bank 2561.	Rosa. (Telegram: Carew, Rosa Telephone 36.)	Shahjahan-pur.	Rosa Junction, E.I.Rly.	......	725	DS
45.	H. R. Sugar Factory, Ltd., M/D. Sahu Ram Swarup, 13, Civil Lines, Bareilly.	Bareilly, (Tel. Sugar. Bareilly. Tel. No. 33. Bareilly.)	Bareilly.	Bareilly Jn., E.I.R. & O.T.Rly.	Buxar.	902	DS
46.	The Kesar Sugar Works Ltd., M/A. Kilachand Devchand & Co., 45/47, Apollo Street, Bombay. Tele { Grams: Seeds, Bombay. Phone: Bombay, 26506.	Baheri (Tel. Kesar, Baheri.)	Do.	Baheri, O.T.R.	Barhaj.	1280	DS
47.	*L. H. Sugar Factories and Oil Mills, Ltd., M/D. Sahu Jagadish Prasad, Pilibhit, Telephone: Pilibhit 32 and 31.	Pilibhit. (Tel. Crystal–Pilibhit, Phone Pilibhit 32.)	Pilibhit.	Pilibhit, Do.	Do.	1800 (Double Tandem).	S

* Both the units working

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
48.	Upper Ganges Sugar Mills, Ltd., M/A. Cotton Agents, Ltd., 8, Royal Exchange Place, Calcutta. Tele { Grams: Cotagent, Calcutta. Phone: Bank 3411.	Seohara, (Tel. Birla, Seohara.)	Bijnor	Seohara, E.I.Rly.	Buxar.	1800	DS
49.	Seth Shiv Prasad Banarasidas Sugar Mills, Lessee: Seth Banarsi Das Gupta.	Bijnor, (Tel. Sugar, Bijnor.)	Do.	Bijnor, Do.	Do.	1100/1200	DS
50.	The Dhampur Sugar Mills, Ltd., M/A. Kr. Murli Manohar Saheb, 13, Civil Lines, Bareilly, Telephone: Bareilly 53.	Dhampur, (Tel. 'Sugarmills,' Dhampur.)	Do.	Dhampur, Do.	Do.	900	DS
51.	The Vijai Lakshmi Sugar Mills, Ltd., (In Liquidation) Doiwala. Liquidators:— (1) J. B. Saxena, Advocate (2) O. N. Tankha, Pleader 1, Kanali Road, Dehradun.	Doiwala, (Tel. Lakshmi, Doiwala, Phone: Dehra-Dun 564. P.P.)	Dehra-Dun.	Doiwala, Do.	......	520*	DC DS
52.	The Ganga Sugar Corporation Ltd., H. O. Tabela Kakaran, Outside Mai Hiran Gate, Jullundar City. Chairman: R. B. L. Isher Dass M.A., LL.B., The Mahalakshi Sugar Mills, Co., Ltd., Hamira (Kapurthala State), Dist. Jullundur.	Deoband. (Tel. Sugar, Deoband. Telephone: Deoband 23.)	Saharanpur.	Deoband, E.P.Rly.	......	1000	DC DS
53.	Rai Bahadur Narain Singh Sugar Mills, Ltd., M/D. Sardar Rajdev Singh, 2, Curzon Road, New Delhi. Telephone: Delhi, 7617.	Lhaksar, (Tel. Sugar, Lhaksar Jn., E. I. [Ry. Telephone: Roorkee 35.)	Do.	Lhaksar, (Jn.) E.I.Rly.	......	1250	DS

54.	The Lord Krishna Sugar Mills, Ltd., Regd. Office: Rupar, East Punjab. M/D. Seth Shiv Prosad.	Saharanpur, (Tel. Sugar, Saharanpur, Telephone: Saharanpur 3 & 3A.)	Do.	Saharanpur, E.P.Rly.	Buxar.	1250	DS
55.	Sir Shadi Lal Sugar and General Mills, Ltd., M/A. M/S. Hariraj Swarup, Rejendralal & Bros., Muzaffarnagar. Tele { Grams: Swesugmill, Muzaffarnagar. Phone: Muzaffarnagar 32.	Mansurpur, (Tel. Swesugmill, Mansurpur, (E.P. Rly.) Telephone: Mazaffarnagar 44 & 69.)	Muzaffar- nagar.	Mansurpur, Do.	Bombay.	1000/1200	DC
56.	Upper India Sugar Mills, Ltd., M/D. P. Srikrishna Deva Bhargava. M/A. M/S. Mitra Mandal, Ltd., 7/13, Daryaganj, Delhi. Tele { Grams: Sugar, Khatauli, Phone: Muzaffarnagar 96.	Khatauli, (Telephone: Muzaffarnagar 96.)	Do.	Khatauli, Do.	......	1149/1400	DC DS
57.	Amritsar Sugar Mills Co., Ltd., M/A. M/S. Amar Singh & Co., Amritsar (Punjab). Tele { Grams: Refiners, Amritsar. Phone: Amritsar 597.	Rohanakalan, P. O. Rohanamills, (Tel. Refiners, Muzaffarnagar. Phone: Muzaffar- nagar 41.)	Do.	Rohanakalan, Do.	Buxar.	1200	DS
58.	Upper Doab Sugar Mills, Ltd., M/A. M/S. Hariraj Swarup, Rajendralal, Debi Prosad & Brothers, Muzaffarnagar. Tele { Grams: Swesugmill, Muzaffarnagar. Phone: Muzaffarnagar 85 A and 32.	Shamli, (Tel. Sugarmill, Shamli. Phone: Shamli 32.)	Do.	Shamli, S.S.L.Rly.	Bombay.	1429	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
59.	Diwan Sugar Mills, Prop. Messrs. Dhanpatmal Diwanchand, 29, Church Road, P. O. Box No. 49, Meerut Cantt. (Dhanpatmal Diwanchand)	Diwannagar, P. O. Sakhoti Tanda, Meerut. (Tel. Diwan mills, Muzaffarnagar, Phone: Muzaffarnagar 77.)	Meerut.	Sakhoti Tanda, E.P.Rly.	Bombay	716*	DS
60.	Daurala Sugar Works, Prop. The Delhi Cloth and General Mills Co., Ltd., Delhi. Tele { Grams : Yarn, Delhi. Phone : Delhi 5243.	Daurala. (Tel. Sugarworks Daurala E.P.R. Telephone : Meerut 452.)	Do.	Daurala, Do.	Do.	1400	DC
61.	Jaswant Sugar Mills Ltd., Meerut City, Meerut (U.P.)	Meerut City. (Telegrams : Godfearing. Telephone : Meerut 573.)	Do.	Meerut City, Do.	Do.	800/1100	DS
62.	Ram Luxman Sugar Mills, Managing Proprietors. (1) M/S. Dinanath Nanakchand, Chawri Bazar, Delhi. Tele { Grams : Ensey, Delhi. Phone : 5004 and 6906. (2) R. S. Chiranjilal & Sons, Sadar Bazar, Delhi. Tele { Grams : Consult, Delhi. Phone : 5011.	Mohiuddinpur, (Tel. Sugarmills, Mohiuddinpur, E.P R. (Telephone : Meerut 482.)	Do.	Muhiuddinpur, Do.	Buxar.	600/800*	DS
63.	The Modi Sugar Mills Ltd., M/A. Rai Bahadur Multanimal & Sons Ltd.,	Modinagar, (Tel. Modisugar, Modinagar, Phone: Meerut 513.)	Do.	Modinagar, Do.	Bombay.	1000	DC

64.	Simbhaoli Sugar Mills, Ltd., Managing Director and Chairman: Sardar Raghbir Singh Sandhanwalia C.I.E., O.B.E. Tele { Grams: Sandhanwalia, Simbhaoli, E.I.R. Phone: Hapur 77.	Simbhaoli, P. O. Baksar.	Do.	Simbhaoli, E. I. Rly.	Do.	850	DS
65.	The Gokulnagar Sugar Mills Co., Ltd., M/A. Sir Gokulchand Narang & Co., Ltd., 3, Cavalry Lines, Delhi.	Gokulnagar (Tel. Sugar Factory, Kichha.)	Naini-Tal.	Gokulnagar, O.T.Rly.	Barhaj.	800	DS
66.	L. H. Sugar Factories & Oil Mill, Ltd., Director-in-charge: Kunwar Ram Raghbir Saheb, B.SC.	Kashipur, (Tel. Crystal, Kashipur.)	Do.	Kashipur, Do.	Do.	650	DS
67.	The Neoli Sugar Factory, Prop: The Saraswati Sugar Syndicate Ltd., P.O. Abdullapur, Dist. Ambala. Telegram: Saraswati, Abdullapur.	Manpore Nagaria, P. O. Neoli. (Tel. Sucrose, Neoli, Etah.)	Etah.	Manpore, Nagaria, Do.	Do.	873	DS
68.	Kamlapat Motilal (Sugar Mills) Prop: Messrs. Kamlapat Motilal, P.B. 69, Kanpur. Tele { Grams: Lalmoti, Kanpur Phone: 2315.	P. O. Motinagar, (Telegram: Lalmoti, Faizabad. Telephone No. 41, Faizabad.)	Faizabad.	Masodha, E.I.Rly. K. M. Sugar Mills Siding E.I.Rly.	Ajodhya ghat.	Cane 1000 Gur 100.	DS
69.	Experimental Sugar Factory, Indian Institute of Sugar Technology.	Nawabganj.	Kanpur.	Rawatpur; B.B. & C.I.R.	......	34	
70.	Kundan Sugar Mills, Managing Partner: Seth Kundan Lal, Amroha, Dist. Moradabad.	Amroha, (Tel. Kundan, Amroha).	Moradabad.	Amroha, E.I.Rly.	Buxar.	500	DS
71.	The Ajudhia Sugar Mills, Prop. Lakshmiji Sugar Mills Co., Ltd., 10, Keeling Road, New Delhi. Tele { Grams: Ajudhia, New Delhi. Phone: 44841, New Delhi.	P. O. Raja-Ka-Sahaspur, (Tel. Sugarmill, Moradabad. Phone: Moradabad 79, Raja-Ka-Sahaspur Special line.)	Do.	Raja-Ka-Sahaspur, Do.	Do.	1305	DS

Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
72. Raza Sugar Co., Ltd., M/A. Govan Bros., (Rampur) Ltd., Rampur (Telephone: 291, 260, 263).	Rampur (Tel. Razaco–Rampur U.P. Telephone 276.)	Rampur.	Rampur, E.I.R.	Buxar.	1150	DS
73. Buland Sugar Co., M/A. Govan Bros., (Rampur) Ltd., Rampur (Telephone: 291, 260, 263).	Rampur (Tel. Buland–Rampur U.P. Telephone 276.)	Do.	Do.	Do.	1150	DC/DS

Uttar Pradesh 73

EAST PUNJAB

Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
1. Saraswati Sugar Mills, M/D. Mr. D. D. Puri, Prop: The Saraswati Sugar Syndicate Ltd.	P. O. Abdullapur, (Telegram: Saraswati, Abdullapur. Telephone: Jagadhri 27.)	Ambala.	Jagadhri, E.P.Rly.	Do.	400	DC & DS

East Punjab 1

ORISSA

Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
1. Orissa Sugar Mills & Distillery & Timber Mills Ltd. Props: Messrs. National Agencies (Orissa) Ltd. Managing Director: Shree Bhagaban Sahu. Manager: L. Jagga Rao Naidu., (Tel. "Kalinga", Aska.)	Aska.	Ganjam.	Berhampur, B.N.Rly.	......	100/120*	
2. Jeypore Sugar Co., Ltd., M/A. Messrs. R. S. Industrial Corporation Ltd., 42–A, Peters' Road, Cathedral P.O., Madras, Manager: Sri N. Ramaseshaiah, B.A., B.L., Rayagada (Dist. Koraput). (Tel. Jeysuco, Rayagada).	Rayagada.	Koraput.	Rayagada, B.N. Rly.	Vizagapatam.	250	DS

Orissa 2

MADRAS

1. The Vizagapatam Sugar & Refinery, Ltd., Anakapalle. M/A. Messrs. Kantilal & Seth Ltd., 14, New Queens Road, Bombay.	Anakapalle. (Tel. "Sugars" Anakapalle.)	Vishakha-patam	Anakapalle, M.S.M.Rly.	Do.	250* Gur 30	DS
2. Etikoppaka Sugar Factory, M/A. The Etikoppaka Co-operative, Agriculture & Industrial Society, Ltd., (Tel. Sugar Factory, Etikoppaka *Via* Narasapatam Road).	Etikoppaka.	Do.	Narasapatam Road, Do.	Do.	600	DS
3. Sri Rama Sugars & Industries Ltd., Prop: Raja of Bobbili, Raja of Venkatagiri and Others, Bobbili. (Tel. Sugar, Bobbili.)	Bobbili.	Do.	Bobbili, B.N.R.	......	450.0	DS
4. Sri Rama Sugars & Industries, Ltd., Seethanagaram.	Seethanagaram.	Do.	Seethanagaram, Do.	......	300	DS
5. The K. C. P. Ltd., Proprietors of Vuyyuru Sugar Factory. (Tel. "Krushna" Vuyyuru).	Vuyyuru.	Kistna.	Bezwada, M. S.M.Rly.	......	850/1000	DS
6. †The Krilampudi Sugar Mills Ltd., M/A. M/S. Kubera Sugar Managers Ltd. Regd. Office: 99-A, Armenian Street, Madras 1. Tele { Grams: Kubera, Madras. Phone: Madras 3006.	Pithapuram.	East Godavari.	Pithapuram, Do.	Kakinada.	600	DS
7. The Deccan Sugar & Abkhari Co., Ltd., M/A. Parry & Co., Ltd., P. B. No. 12, Madras. Tele { Grams: Parry, Madras. Phone: Madras 2983.	Samalkot, (Tel. Deccan,	Do.	Samalkot, Do.	Cocanada	500	DS

Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
8. †M/S. Godavari Sugars & Refiners Ltd., M/A. M/S. AIDCO Ltd. 35, Luz Church Rd. Mylapore Madras Telegraphic address: Panchadara, Madras. Tele { Grams: Ferage, Madras, Phone: No. 3006, Madras.	Tanuku.	West Godavari	Tanuku, M.S.M.Rly.	......	200	DS
9. The East India Distilleries & Sugar Factories Ltd., M/A. Parry & Co., Ltd., P. B. No. 12, Madras. Tele { Grams: Parry, Madras. Phone: Madras 2983.	Nelikuppam. (Tel. Distimulo, Nelikuppam).	South Arcot.	Nelikuppam, S.I.Rly.	Cuddalore.	2200	DS
10. The India Sugar & Refineries Ltd.	Hospet. (Tel. Sugars, Hospet.)	Bellary.	Hospet, M.S.M.Rly.	......	600	DS
11. The Coimbatore Agro Industries Ltd., M/A. M/S. V. C. Vellingiri Gounder & Co.	Podanur.	Coimbatore.	Podanur, S.I.Rly.	......	50*	
12. The Murugappa Sugar Co., Ltd., Mailpatti, (N. Arcot).	Mailpatti.	N. Arcot	Mailpatti, M.S.M.Rly.	Madras.	Cane 75	S
13. The Deccan Sugar & Abkhari Co., Ltd., Pugalur Sugar Factory, M/A. Parry & Co. Ltd., P. B. No. 12, Madras Tele { Grams: Parry, Madras. Phone: Madras 2983.	Pugalur Sugar Factory P.O. (Tel. Desuabco. Pugalur.)	Trichinopoly	Pugalur, S.I.Rly.	......	700	DS
14. ‡The Andhra Sugar Ltd. M/A. M/S. Ranga Rao & Co., Tanuku, West Godavari District.	Tanuku.	West Godavari District.	Tanuku, M. & S.M.Rly.	Madras.	600	DC

15.	The Madura Sugars and Allied Products Ltd., Tele: " Sweet " Ammayanayakanur M/A. Pandia Rajan & Co. Ltd., Pandiarajapuram P. O.	Pandiaraja-puram.	Madura.	Kodaikanal Road, S.I.Rly.	......	317	DS

Madras 15

BOMBAY

1.	The Saswad Mali Sugar Factory, Ltd., Head Office: P. O. Malinagar. M/D. H. B. Girme, Esqr. Bombay Office: Sir Vithaldas Chambers, 16, Apollo Street, Fort, Bombay. Tele { Grams: Malisugar, Bombay. Phone: Bombay 20134.	P. O. Malinagar, (Tel. Malisugar, Akluj.)	Sholapur.	Kurduwadi, G.I.P.Rly. Pandharpur, B.L.Rly.	......	450/500	DS
2.	The Brihan Maharastra Sugar Syndicate, Ltd., M/A. C. G. Agashe & Co., Commonwealth Building, 980, Sadashiv Luxmi Road, Poona 2. Tele { Grams: Shree, Poona & Akluj. Phone: 9—138.	P.O. Shreepur.	Do.	Pandharpur, B.L.Rly. Diksal, G.I.P.Rly.	......	350	DS
3.	Walchandnagar Industries Ltd., M/A. The Premier Construction Co., Ltd., Construction House, Ballard Estate, Bombay. Tele { Grams: Walsakhar, Bombay. Phone: Bombay 26036, 37, 38 and 39.	P.O. Walchand-nagar, (Tel. Walsakhar Diksal G.I.P.)	Poona.	Diksal, G.I.P.Rly. Baramati, D.B.Rly., Nira, M.S.M.Rly.	Bombay.	1200/300	DS
4.	The Ravalgaon Sugar Farm, Ltd., M/A. Walchand & Co., Ltd., Construction House, Ballard Estate, Bombay. Te e { Grams: Rasufald, Bombay. Phone: Bombay 26036, 37, 38, and 39.	Ravalgaon. (Tel. Rasufald, Malegaon.)	Nasik.	Manmad, G.I.P.Rly. Bombay	Do.	800	DS

	Name of Mill, with full name and address of Managing Agents or Proprietors	*Location*	*District*	*Nearest Railway Station*	*Nearest Steamer Station*	*Daily cane-crushing capacity (tons)*	
5.	The Belapur Co., Ltd., Managers: W. H. Brady & Co., Ltd., Royal Insurance Building, Churchgate Street, Fort, Bombay. Tele { Grams: Brix, Bombay. Tele { Phone: Bombay 25037.	Harigaon, (Tel. Belapur Company— Belapur Road.)	Ahmednagar.	Belapur, G.I.P. Rly.	Bombay	1000	DS
6.	The Maharastra Sugar Mills Ltd., M/A. M. L. Dahanukar & Co., Ltd., Industrial Assurance Buildings, 3rd Floor, Opposite Churchgate Station, Fort, Bombay. Tele { Grams: Sugar Mills, Bombay. Tele { Phone: Bombay 30825.	P.O. Tilaknagar, Belapur Road, (Tele. Sugar Mills, Belapur Road. Phone—Belapur Road P.C.O. Extension.)	Do.	Do.	Do.	1200	DS
7.	Belvandi Sugar Farm, Ltd., M/A. M. L. Dahanukar & Co., Ltd., Industrial Assurance Building, 3rd Floor. Opposite Churchgate Station, Fort, Bombay. Tele { Grams: Design, Bombay. Tele { Phone: Bombay 30825.	P.O. Belvandi Sugar Farm, (Tele. Sugar farm, Belvandi, G.I.P.)	Do.	Belvandi, Do.	Do.	250/300	DS
8.	Godavari Sugar Mills Ltd., M/A. K. J. Somaiya & Sons, Fazalbhoy Building, Mahatma Gandhi Road, Fort, Bombay. Tele { Grams: Manikaka, Bombay. Tele { Phone: Bombay 31921.	Sakarwadi.	Do.	Kanhegaon, Do.	......	750/800	DS
9.	The Somaiya Sugar Factory, Controlled by Godavari Sugar Mills, Ltd., M/A. K. J. Somaiya & Sons, Fazalbhoy Building, Mahatma Gandhi Road, Fort, Bombay. Tele { Grams: Manikaka, Bombay. Tele { Phone: Bombay 31921.	Lakshmiwadi, *via* Kopergaon.	Do.	Kopergaon, Do.	......	600	DS

10.	Shree Changdeo Sugar Mills Ltd., M/A. Messrs. A. H. Bhiwandiwalla & Co., 32, Apollo Street, Fort, Bombay. Tele. Jaysugar, Bombay.	P.O. Changdeo-nagar, (Tele. Sugarmills, Puntamba, G.I.P.)	Ahmednagar.	Puntamba, Do.	Bombay.	350	DS
11.	The Phaltan Sugar Works Ltd., M/A. Mafatlal, Apte & Kantilal, Ltd., Sakharwadi, Satara.	Sakharwadi, (Tel. Sakhar, Phaltan.)	Satara.	Nira, M.S.M.Rly.	Do.	625/650	DS
12.	The Kolhapur Sugar Mills, M/A. The United Agencies Ltd., P. O. Kolhapur; Residency. Tele { Grams : Sugarmills, Phone : 277 Kolhapur.	Kasaba Bavada, Kolhapur. (Tel. Sugar Mills, Kolhapur.)	Kolhapur.	Kolhapur, Do.	Do.	500	DS
13.	Krishna Sugar Mills Ltd., M/A. M/S. Vinchurkar & Co., P. O. Krishna Kittur, Dist. Belgaum, *Via* Kudchi, Tel. Address : Krishna Sugar, Kudchi.	Krishna-Kittur.	Belgaum *via.* Kudchi.	Shedbal, Do. Kudchi, Do.	Do.	200	DS
14.	The Ugar Sugar Works Ltd., Managing Agents : M/S. Shirgaokar Brothers, Kolhapur-Shahupuri.	Ugar Khurd.	Belgaum	Ugar Khurd, Do.	Ma Harbou..		DS

Bombay 14

CHIEF COMMISSIONERS' PROVINCES.

1.	Bhopal Sugar Industries Ltd., M/A. Messrs. A. H. Bhiwandiwalla & Co. Sehore.	Sehore.	Bhopal.	Sehore G.I.P.	......	750	DS
2.	Shree Bijay Sugar Mills. Bijainagar.	Bijainagar.	Ajmere.	*Bijainagar* B.B. & C.I. Ry.	......	350	DS

Chief Coms'. Provinces 2

Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
STATES AND STATES UNIONS.						
(Kashmir)						
1. †Shree Yuvraj Sugar Mills, Ltd., M/A. Messrs. Karam Chand Thapar & Bros. (Jammu & Kashmir) Ltd., Ranbirsinghpura.	Ranbirsinghpura.	Jammu & Kashmir State.	Ranbirsinghpura, N.W.Rly.	Karachi.	600	DS
Patiala and East Punjab States Union.						
2. Jagatjit Sugar Mills, Co., Ltd., M/A. Narang Brothers & Co., Ltd., 3, Cavalry Lines, Delhi. Telegrams : Narangbro, Delhi.	Phagwara, (Tel. Sugar Factory, Phagwara. Telephone : Phagwara 101).	Kapurthala.	Phagwara, E.P.Rly.	Bombay.	850	DC
3. The Mahalaxmi Sugar Mills Co., Ltd., (The Paramjit Sugar Factory) Tele { Grams : Sugar, Jagatjitnagar; Phone : Kapurthala 50.	Jagatjitnagar, P.O. (District-(Kapurthala).	Patiala and East Punjab States Union.	Hamira, Do.	Do.	1800	DC/DS
(Mysore)						
4. Mysore Sugar Co., Ltd., H. O. Sri Jayachamaraja Wadiyar Road, Bangalore City. Tele { Grams : Mysugar, Bangalore.; Phone : 2133.	Mandya, (Tel. Mysugar, Mandya).	Mysore State.	Mandya, M.S.Rly.	......	1400	DS
(Madhya Bharat)						
5. The Jaora Sugar Mills, Prop : Kaluram Govindram, Jaora, C. I., Telegram : Sugar, Jaora.	Jaora	Jaora.	Jaora, B.B. & C.I.Rly.	Bombay.	750	DS

States & States Union 4

6. The Gwalior Sugar & Co., Ltd., Sir J. P. Srivastava & Sons (Madhyabarat) Ltd., Dabra, Dist. Gwalior, Madhyabharat.	Dabra, (Tel. Sugar, Dabra), Phone: via Gwalior Exchange :— Dabra, 2 and 3.	Madhya Bharat.	Dabra, G.I.P.Rly.	......	700	DC & DS
7. The Jiwaji Rao Sugar Co., Ltd., M/A. M/S. Shapoorji Pallonji (Gwalior) Ltd., Dalauda.	Dalauda.	Mandsaur.	Dalauda,	Bombay.	550	DS
8. The Maharani Parvati Sugar Mills Ltd., M/A. Seth Onkarjee Kasturchand, Indore. Tel. Sugarmills, Sarangpur.	P. O. & Tel. Office. Sarangpur.	Madhya Bharat.	Akodia, G.I.P.Rly.	......	400	
9. Seth Govindram Sugar Mills, Proprietors: M/s. Nandlal Bachulal.	P.O. & Rly. Station Mehidpur Road.	Madhya Bharat Union.	Mehidpur Road, B.B. & C.I.Rly.	Bombay.	300	DS
10. ‡Shree Vikram Sugar Mills, Ltd., M/A. M/S. Hiralall & Co., 25, Tukoganj Road, Indore. Tele { Grams : Binod, Indore. Phone : 282 Indore.	Alote.	Dewas State Senior.	Vikramgarh —Alote, Do.	Do.	500	DS
				Madhya Bharat 10		

(Greater Rajasthan)

11. The Bikaner Industrial Corporation Ltd., Managing Agents; The Podar Bapna Ltd., Tel. Industries, Sri Ganganagar.	Sir Ganganagar.	Bikaner State.	Sri Ganganagar Bk. S. Rly.	......	600	DS
12. The Mewar Sugar Mills, Ltd., M/A. Dhandhania Kedia & Co., Bhupalsagar, Rajasthan.	Bhupalsagar (Telegram, Sugar-mill, Bhupalsagar R. Ry.)	Rajasthan.	Bhupalsagar, Rajesthan Rly.	Bombay.	500	DS
				Greater Rajasthan 2		

No.	Name of Mill, with full name and address of Managing Agents or Proprietors	Location	District	Nearest Railway Station	Nearest Steamer Station	Daily cane-crushing capacity (tons)	
	(Hyderabad)						
13.	The Nizam Sugar Factory Ltd., M/A. H. E. H. The Nizam's Industrial Trust Fund, Represented by the Hyderabad Construction Co., Ltd., Abid Road, Hyderabad (Deccan). Telephone: Hyderabad (Deccan) 2704.	Shakarnagar (Tel. Sugar.)	Hyderabad. State.	Shakarnagar Nizam St. Rly.	......	1300/1500	DS
14.	†The Salar Jung Sugar Mills, Ltd., M/A. M/S. B. M. Murarilal & Co. 499A (2), New Road, opposite Bashir Bagh, Hyderabad, Deccan. Telegrams: Sucrose, Hyderabad, Deccan.	Munirabad.	Do.	Munirabad, M.S.M.Rly.	Goa.	250/300	DS
					Hyderabad 2		
	(Saurashtra)						
15.	†Bhavnagar Sugar Mills, Ltd., M/A. M/S. N. P. Deliwalla & Sons., Ltd., Opp. General Post Office, Bhavnagar.	Dhola Jn.	Bhavnagar State.	Dhola Jn., S.Rly.	Bhavnagar Port.	350/400	DS
					Saurashtra 1		
	(United State of Travancore & Cochin)						
16.	Pamba River Factory of The Travancore Sugars & Chemicals Ltd., Secretaries & Treasurers: Messrs. Parry & Co., Ltd. P. B. No. 12, Madras. Tele { Grams: Parry, Madras. Phone: Madras 2983.	Tiruvalla, (Tele. Sugars, Tiruvalla. Phone: Trivandrum 280).	Travancore.	Kottarakara, S.I.Rly.	Cochin.	500	DS
					U. S. of Travancore & C. 1		
	Vindhya Pradesh						
17.	†Sri Lakshmi Narayan Sugar Works Ltd., M/A. M. D. Singh & Co., 20, Garden Reach Road, Calcutta.	Harpalpur.	Alipura.	Harpalpur, G.I.P.Rly.	......	100	S
					Vindhya Pradesh 1		

DETAILED LIST OF GUR REFINERIES IN THE UNION OF INDIA, 1949-50.

	BIHAR.						
1.	Siwan Deshi Sugar Factory, Prop M/S. Noori Mian & Co., Bhatni, Gorakhpur.	Siwan.	Saran.	Savan, O. & T.Rly.	Sava O.A.		
	UNITED PROVINCES						
1.	Standard Refinery & Distillery Ltd., M/A. Karam Chand Thapar & Bros., Ltd., 5, Royal Exchange Place, Calcutta. Tele { Grams: Spiritual. Phone: Bank 1134/6.	Unao.	Unao.	Unao, E.I.R. & O & T. Rly.	Buxar	75	
2.	Baijnath Balmakund Sugar Mills, Prop: Mrs. Bankey Beharilal Singhania, Lalbankey St., Kanpur. Tele { Grams: Lalbankey. Phone: 2489.	Anwarganj.	Kanpur.	Anwarganj, B.B. & C.I.Rly.	Barhaj.	27	
	PUNJAB (1).						
1.	Amritsar Sugar Mills Co., Ltd., M/A. M/S. Amarsingh & Co., P. O. Seth Mills Amritsar, Phone: 597.	Gr. Trunk Road, Amritsar (Tel. Refiner, Amritsar).	Amritsar.	Amritsar.	Bombay.	42	
	MADRAS.						
1.	Al. Vr. St. Sugarmills & Distillery, Prop. Al. Vr. St. Veerappa Chettiar, Zamindar of Thevaram Devakottai.	Tachanallur, (Tel. Sugarmill, Tirunelveli Ind).	Tinnevelly.	Tinnevelly Jn., S.I.Rly.	Tuticorin.		......
2.	Lakshmi Sugar Mills, Alvatirunagari, (Tel. Luxmi Sugar, Alvartirunagari). Prop. T. A. Daivanayaga Thevar, Tinnevelly.	Near Laksmanatope. Tiruchendur Taluk.	Do.	Alwar. Tirunagari, S.I.Rly.	Do.		......
	INDIAN STATES.						
1.	The Travancore Sugars & Chemicals Ltd., Secretaries & Treasurers: Parry & Co., Ltd., P. B. No. 12, Madras. Tele { Grams: Parry, Madras. Phone: Madras 2983.	Thuckalay, (Tel. Sugars Thuckalay.)	Travancore Cochin State.	Trivandrum, S.I.Rly.	Trivandrum	18	

DETAILED LIST OF SUGAR MILLS (VACUUM PAN) IN PAKISTAN, 1950.

NOTES :—*Asterisk in the last but one column denotes mills which have also got Gur-refining plants.*

Mills marked thus did not work during 1947–48 season.

" " " are reported to be under construction.

"S"=Sulphitation. "DS"=Double Sulphitation. "C"=Carbonatation. "D"=Double Carbonatation.

EAST BENGAL (EASTERN PAKISTAN)

Name of Mill, with full name and address of Managing Agents or Proprietors	*Location*	*District*	*Nearest Railway Station*	*Nearest Steamer Station*	*Daily cane-crushing capacity (tons)*	
1. North Bengal Sugar Mills Co., Ltd., M/A. M/S. Soorajmull Nagarmull, 8, Dalhousie Square East, Calcutta. Tele { Grams : Sugar, Calcutta, Phone : Bank 6853—6858 (6 Lines).	Gopalpur. (Tel. Sugar, Gopalpur Rajshahi.)	Rajshahi.	Gopalpur E.B.Rly.	Saraghat.	1250*	DS
2. Setabganj Sugar Mills Ltd., M/A. M/S. Soorajmull Nagarmull, 8, Dalhousie Square East, Calcutta. Tele { Grams : Sugar, Calcutta. Phone : Bank 6853—6858 (6 Lines)	Setabganj. (Tel. Sugar, Setabganj, Dinajpur, East Pakistan.)	Dinajpur.	Setabganj. E.B.Rly.	Manihari.	800*	DS
3. Carew & Co., Ltd., M/A. M/S. Gladstone Lyall & Co., Ltd., 4, Fairlie Place, Calcutta. Tele { Grams : Ghat, Calcutta. Phone : Bank 2561—2565 (5 Lines).	Darsana.	Kushta.	Darsana, E.B.Rly.	Lalgola.	1500*	DS
4. †The Desbandhu Sugar Mill Ltd., M/A. The Industrial Agency, 58, Patuatully, Dacca.	Charsindur.	Dacca.	Ghorashal, (Flag) E.B.Rly.	Sultanpur Ghat	250	DS

East Bengal 4

WESTERN PUNJAB.

1. †The Gujranwalla Sugar Mills Co., M/A. Narang Bros., Ltd., 3, Montgomery Road, Lahore. Singh & Co., Ltd., Civil Station, Gujranwala. Tele { Grams : Narang, Lahore. Phone : Lahore 4767.	Rahwali. (Tel. Sugar mill, Gujranwala. Telephone : Gujranwala 64.)	Gujranwala.	Rahwali, N.W.Rly.	Karachi.	300/450	DS
2. †The Pattoki Sugar Works, Pattoki, Prop. Seth C. K. Deliwalla (Goa), Civil Lines, Bareilly, U.P.	Pattoki.	Lahore.	Pattoki, N.W.Rly.	Do.	100	

Western Punjab 2

N. W. F. PROVINCE

1. The Frontier Sugar Mills & Distillery Ltd., Tele { Grams : Sugar Mills, Takht-i-Bhai. Phone : 27 Mardan.	Takht-i-Bhai.	Mardan.	Takht-i-Bhai N.W.Rly.	Do.	400/600	DC/S
2. †The Premier Sugar Mills & Distillery Co., Ltd., Chairman : R.B. L. Isherdas, Mardan. Tele { Grams : Premier, Mardan. Phone : 34 Mardan.	Mardan.	Mardan.	Mardan. N.W.Rly.	Do.	300	DC

N. W. F. P. 2

GEOGRAPHICAL DISTRIBUTION
OF
SUGAR MILLS IN THE UNION OF INDIA
(1950)

State	Sugar Mills	Gur refineries only.	Total.	Annual Production of Sugar.
West Bengal	4	...	4	10 lakhs tons
Bihar	30	1	31	
United Provinces ...	73	2	75	
East Punjab	1	1	2	
Madras	15	2	17	
Bombay	14	...	14	
Orissa	2	...	2	
Chief Commissioner's Provinces	2	...	2	
Indian States and States Unions	17	1	18	
TOTAL ...	158	7	165	

GEOGRAPHICAL DISTRIBUTION
OF
SUGAR MILLS IN PAKISTAN
(1950)

Province	Sugar Mills	Gur refineries only.	Total.	Approximate Annual Production of Sugar.
East Bengal	4	...	4	20,000 tons
West Punjab	2	...	2	
N. W. F. P.	2	...	2	
TOTAL ...	8	...	8	

No. of Mills in India and Pakistan (including Gur Refineries) actually working in the season 1949-50 was about ... 146

No. of Mills in India and Pakistan (including Gur Refineries) that did not work during the season 1949-50 (Mills under construction included) ... 27

Bombay, 30th December, 1950

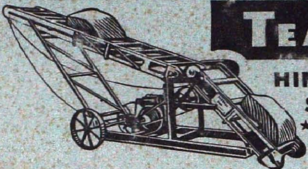
GA[illegible] & CO. (*Publishers*)

LIBRARY
MADRAS

ATTENTION OF SUGAR FACTORIES

Before Crushing Season starts, book your seasonal requirements of sugar conveyor chains and complete chain drives ex stock.

We can also supply the undermentioned items:



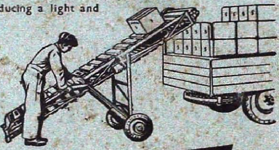
TEANTEE

HINGED BOOM SACK PILER

- Right thing for the right Job
- One man operation
- Easy to operate

Suitable for stacking or piling sacks or bags of all sorts where an extra wide range of discharge heights is necessary.

LORRY LOADING CONVEYOR



This small loading conveyor has been developed over several years with a view to producing a light and handy standardised machine of great practical utility. It conveys and elevates cases or bags up to 1½ cwts. (75 kg.) to a height variable while working by means of a simple hand winch (being operated by the boy shown in the illustration) between approximate 4 ft. and 6 ft. 6 in. (1.2 m. and 2 m.)

SOLE DISTRIBUTORS FOR INDIA,
PHOENIX TRADING CO.
MERWAN BUILDING,
SIR P. M. MEHTA RD. BOMBAY, 1.

Book your orders in advance to avoid disappointment.